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OUR HERITAGE OF THE PICTURESQUE,

	EDWARD HAGAMAN HALL	349
GROWTH OF CITIES: 1890-1900,	- - ADNA F. WEBER	367
ANOTHER VIEW OF MUNICIPALITIES AND VICE,	-	376
FRANCHISE TAXATION IN ILLINOIS,	HIRAM B. LOOMIS	388
VALUATION OF CITY REAL ESTATE FOR TAXATION,	W. A. SOMERS	401

RAILWAY FRANCHISES:

RECENT LEGISLATION IN PENNSYLVANIA AND PHILADELPHIA,	- - CLINTON ROGERS WOODRUFF	419
BOSTON'S NEW SUBWAY,	- - WILLARD WINSLOW	427
NEW YORK'S SUBWAY POLICY,	- WILLIAM J. GAYNOR	433
STREET RAILWAYS OF CHICAGO:		
REPORT OF CIVIC FEDERATION COMMITTEE,		439
ANALYSIS OF FINANCIAL OPERATIONS,	MILO ROY MALTBIE	441
ACCOUNTANT'S REPORT,	- EDMUND F. BARD	484
BIBLIOGRAPHICAL INDEX,	- - - - -	595
BIOGRAPHICAL NOTICES,	- - - - -	620

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MORRIS OR JUMEL MANSION—WASHINGTON'S HEADQUARTERS.
(Built 1758.)—See page 354.

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OUR HERITAGE OF THE PICTURESQUE.

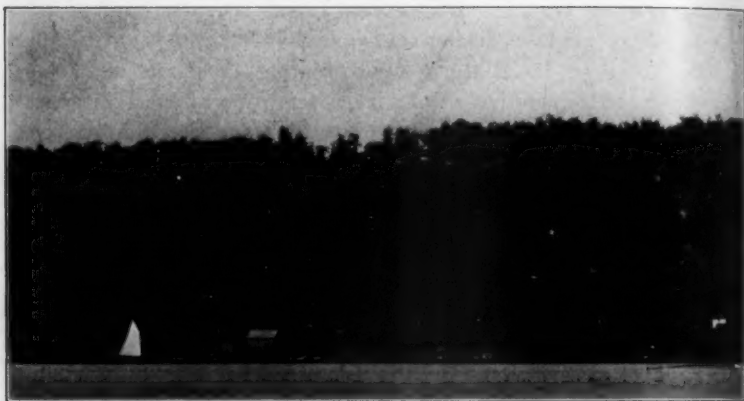
BY EDWARD HAGAMAN HALL.

The Rescue of the Palisades.

The States of New York and New Jersey recently have given to the country a distinguished example of æsthetic progress, in the action of their Legislatures appropriating the sums of \$400,000 and \$50,000, respectively, for the preservation of the Palisades. Not since the appropriation of about a million and a half dollars by the New York Legislature in 1885 for the purchase of the Niagara Falls Reservation has so large a sum of money been set apart by our State government for a purely æsthetic object. The unalloyed approval of the action of the legislature by public sentiment indicates a very great advance in public opinion, for the usually quarrelsome taxpayer has consented without a grumble to the spending of nearly half a million dollars for the perpetuation of a beautiful landscape, without the slightest pretense that it is for the improvement of commercial facilities or the enhancement of real estate values.

The significance of the action is further emphasized by the fact that of the $13\frac{1}{2}$ miles of precipitous and picturesque river front to be rescued from commercial vandalism, three-quarters are in the State of New Jersey, whose inhabitants cannot appreciate their beauty from their own soil, while only one-quarter lies in New York, whose inhabitants can view the whole stretch. For the privilege, therefore, of looking across the Hudson at an undefiled New Jersey landscape, New Yorkers are willing to pay eight-fold as much as their New Jersey neighbors, who really own the bulk of the property. If this is not an example of æsthetic progress, it would be difficult to cite one. What the progressive action of the two States means in the rescue of the landscape beauty of the Hudson from disfigurement is strikingly illustrated by two views shown below.

This achievement is the joint result of the public-spirited activities of four agencies—the American Scenic and Historic Preservation Society, the Federation of Women's Clubs of New Jersey,* a group of broad-minded and liberal men of New York and New Jersey, and the Inter-State Palisades Park Commissioners. With the fullest appreciation of the indispensable services rendered, and still being rendered, by the last three factors mentioned, a brief description of the work of the first during six years of existence may be of service.



THE PALISADES ABOVE FORT LEE.

Heretofore, the principal cultivators of municipal æsthetics have been the exclusively art societies. Six years ago Mr. Andrew H. Green conceived the idea of creating by special act of the legislature a corporation which should unite in one organization the efficient forces represented by the historical and the art societies. First known as "The Trustees of Scenic and Historic Places and Objects," it has recently changed to "The American Scenic and Historic Preservation Society." The incorporators were all public-spirited men, including, besides Mr. Green, Charles A. Dana, Oswald Ottendorfer, Chauncey M. Depew, Horace Porter, William M. Evarts, Benjamin F. Tracy, William Allen Butler, Wager Swayne, Alexander E. Orr, Charles R. Miller, Frederick W. De-

*Now the League for the Preservation of the Palisades.

voe, and some forty others. Around this nucleus have been gathered several hundred members, men and women.

The charter of the society, as originally drawn up, contemplated the gradual absorption into this corporation of all state commissions having anything to do with similar objects. The legislature struck out that feature, but left a carefully guarded body of powers, enabling the corporation to receive by purchase, gift, grant, devise or bequest, memorable or picturesque places and objects and administer them as trustees for the public good. It also authorized the corporation to act jointly with persons appointed by other States where joint action was necessary for the attainment of

the object—the preservation of the Palisades being particularly in mind at the semi-official time. A status was given by the require-



AN INSTANT OF DISFIGUREMENT. (To be restored.)

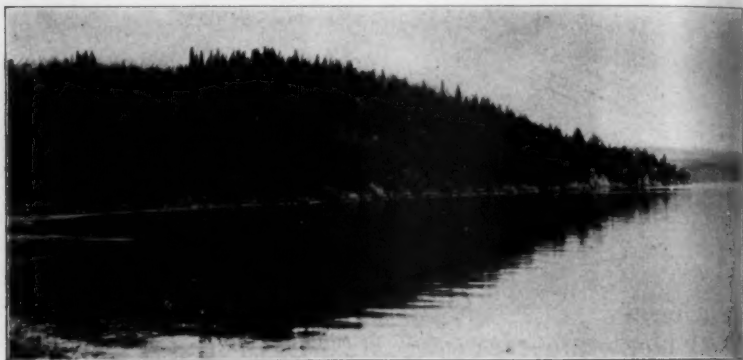
ment of an annual report to the legislature and the privilege of making recommendations, by bill or otherwise, at any time.

The success attending its efforts and the demand for the conservation of scenery, landmarks and relics in all parts of the country—from the battlemented shores of Lake Champlain to the storied mounds of New Mexico and the leafy giants of California—have led to the recent enlargement of its charter powers, so that it may extend its operations to all parts of the United States.

Alliance of History and Art.

It is interesting to note how readily the scenic and historic principles merge. While an object may be picturesque without being historic, where it is old enough to be historic it is almost invariably picturesque. The magnitude of the size of a growing object, the softening color due to exposure to the elements, the

state of dilapidation due to neglect, the vegetable growths that spontaneously overrun an abandoned structure, the obsolescence of style of architecture or construction due to progress in art or invention, all tend to give objects a picturesque aspect and frequently an educational or scientific value by the time they are old enough to be called "historic." On the other hand, there is a very strong probability that notable features of the landscape will be found to possess historic interest from identification with human activities. A great rock, like the Devil's Dans Kammer in Newburgh bay, would be selected by the aborigines for their councils or religious rites; a jutting crag, like the Flat Rock of the Pali-



STONY POINT BATTLE-FIELD.

sades, near Fort Lee, would be chosen for an observatory, sentinel post or signal fire; a great tree, like that at Cambridge, Mass., under which Washington took command of the Continental army, or the treaty oak in Pelham Bay Park, near Pelham Manor, under which the white settlers made their compact with the Indians, would be selected for an important ceremony; or a beautiful hill, like that in Tappan, N. Y., on which Major Andre was executed, would be chosen for the publication in the sight of a multitude of the terrible punishment that awaited the spy or the traitor. The first instinct of a military engineer in time of war is to erect his fortifications on commanding heights, which are invariably picturesque.

The battlefield of Stony Point, on the western side of the Hudson river, about 38 miles above New York, is a conspicuous example. Here is a peninsula of some 50 or 75 acres in extent, rising precipitously from the river and adjacent swamp to an elevation of 130 feet, which was successively fortified by the Americans and British during the Revolutionary war on account of its strategic value, and was made memorable by the daring exploit of



FORT CROWN POINT RUINS.

"Mad" Anthony Wayne on the night of July 15-16, 1779. This battle-crag—it can hardly be called a battlefield—a portion of which the American Scenic and Historic Preservation Society has persuaded the State to take for a state reservation, and of which it is the custodian for the State, commands probably a more extended and picturesque view of the Hudson river than any other point of equal elevation.

The battlefield at the head of Lake George, made notable by many tragic events, in the French-and-Indian and Revolutionary wars and the principal scene of Cooper's romantic novel, "The Last of the Mohicans," was not selected for the construction of Fort William Henry and Fort George and the Entrenched Camp primarily because it was picturesque, but because it was dangerously situated for military operations; but the very physical characteristics that gave it its strategic value and led to its becoming historic, made it picturesque. The reservation of 35 acres of this battlefield for another State park

not only perpetuates a beautiful landscape but preserves a memorable battlefield. The ruins of Ticonderoga, standing on the bluff where the outlet of Lake George empties into Lake Champlain and those largest and most impressive military ruins in the United States on Crown Point, Lake Champlain, fall directly into the same category of scenic-historic places, and are also the objects of the society's solicitude.

Preservation of Historic Buildings.

We notice a similar principle governing the location of some of the best architectural relics of colonial days. The *isolated dwelling* was situated, when possible, on some easily defended eminence which gave it a picturesque value in addition to any other which it might possess from intrinsic sightliness or acquire from personal associations. When these buildings were the homes of influential and wealthy families—and such families had their choice of locations—the houses were substantially built and in the best architectural form of the period, and therefore most likely to give to us the best picture of the architecture of their day. In this class may be mentioned the Washington headquarters in New York City, generally styled the Morris or the Jumel Mansion (see illustration on page 348). This building, which was an isolated dwelling nine or ten miles out in the country when it was built, is an exceptional combination of three elements—picturesque location, commanding a superb prospect of land, river and sound; beautiful architecture, one of the best preserved specimens of classic colonial building in America; and historic association, due to its occupation by Washington during a portion of the year 1776, and other celebrated individuals and families at other times, including Aaron Burr, who married Madam Jumel. The acquisition of this building and the surrounding land as park property at the instigation of the American Scenic and Historic Preservation Society is one of the most commendable acts of the present municipal administration.

Another building on Manhattan island, about a mile south of the Washington headquarters and on the same elevated ridge, is not so beautiful intrinsically as the Washington headquarters, but is not less interesting, namely, the residence of Alexander Hamil-

ton during the most distinguished years of his life as a statesman, and the home from which he departed that July morning in 1804 to meet his death at the hands of a Vice-President of the United States on the Weehawken duelling ground. During the last session of the Legislature, the Alexander Hamilton Post, G. A. R., and the Scenic and Historic Preservation Society took up the



HAMILTON GRANGE, NEW YORK.

movement to have this building acquired by the city and moved back across the street to its original site by what is left of the thirteen symbolical trees which Hamilton himself planted. A bill making the purchase mandatory failed of passage, and a second bill, making it permissive, passed, but encountered the disapproval of Mayor Van Wyck. The house itself, as has been said, is of little intrinsic value, but as a reminder of the great American statesman, it is more eloquent than any other structure in New York City. The career of Hamilton—the West Indian boy of obscure parentage, the clerk, the college student, the ardent soldier, the chief secretary and confidential aide of Washington, the writer, the brilliant lawyer, the financier who as first Secretary of the Treasury organized the financial system of the United States Government the essential features of which still exist; the disinterested patriot who saved the nation and the State of New York by defeating the aspirations of a traitor for the Presidency of the one and the Governorship of the other—such a career is sure to inspire the loftiest ideals of American citizenship in the rising generation, as well as to excite the admiration of every mature inhabitant of the United States. It is a marvel that in the city of his home, upon which the

lustre of his name so brightly shines, there are only two monuments to his memory—a statue in Central Park, the in-



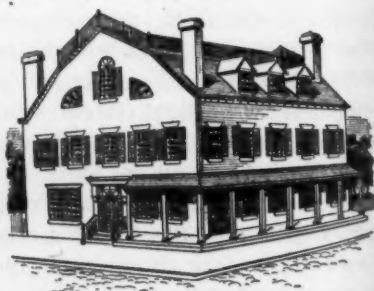
THE POE COTTAGE.

dividual gift of one of his own descendants, and a statue in front of the Hamilton Club, in Brooklyn, erected by the private subscriptions of the club members. Happily, public sentiment is awakening to an appreciation of the value of such reminders as the "Hamilton Grange" in promoting good citizenship by perpetuating the memories of good

citizens, and it is not unreasonable to hope that this member of the extremely small group of historic buildings in New York may yet be brought within the pale of safety by some appropriate action by the legislature or municipal government.

Upon another hill, on the King's Bridge road, near East 192d street, stands a tiny cottage in which Edgar Allan Poe won many of his poet's laurels and in which his beautiful wife died. In the creation of the Poe park across the street, and in the effort still being made for the preservation of the cottage itself, particularly by the Women's Auxiliary of the Scenic and Historic Preservation Society, we see the love of the beautiful in letters lending its helping hand in the advancement of the City Beautiful.

There is a very encouraging prospect that the power of historic memories will be the means of adding another picturesque feature to the small park system of New York by the city's acquisition of the block or half block upon which stands the famous Fraunces' Tavern, at Broad and Pearl streets. This ancient house of entertainment, the scene of many patriotic



PROPOSED RESTORATION OF
FRAUNCES' TAVERN.

meetings and distinguished ceremonies and the place in which Washington bade farewell to his officers at the close of the War for Independence, has been so altered as to leave almost no trace of its original appearance. At the earnest solicitation of the patriotic and historical societies, under the leadership of the American Scenic and Historic Preservation Society and its Women's

Auxiliary, the President of the Borough of Manhattan, James J. Coogan, and the local board of the Tenth district, have favorably recommended to the board of public improvements the preservation of the building within the bounds of a small park. If this is done, willing hands will see that the build-



VAN CORTLANDT MANSION.
(Built 1748.)

ing is restored to ancient quaintness of form, and it will become to New York what the Old South church and Faneuil Hall are to Boston, or Independence Hall to Philadelphia.

The Van Cortlandt mansion, standing in the midst of the extensive acres of Van Cortlandt park, is a specimen of another school of colonial architecture, which, partly on account of its more remote location, has fared more fortunately than Fraunces' Tavern. This structure, dating back to the year 1748, is preserved in all its original architectural character, and the interior, in the hands of the Colonial Dames, presents many instructive features of colonial domestic life.

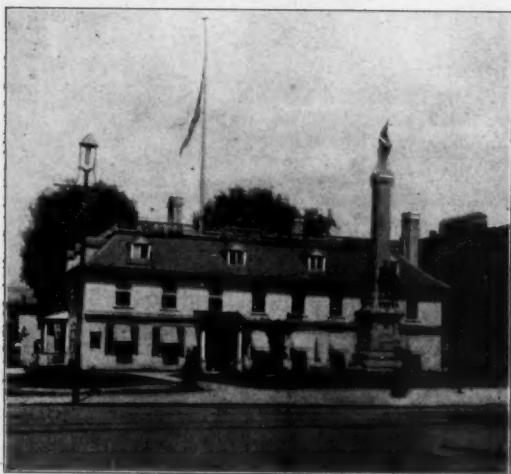
It would be well if the remarkable Philipse Manor Hall at Yonkers were as safely removed from danger of mutilation or destruction. This venerable building, the oldest part of which was

erected in 1682, is one of the most valuable antiquities of the Hudson. This is almost the only relic of the mediaeval feudal system which had a temporary foothold on the soil of this State, and is now occupied by the municipal government of Yonkers, which, under the pressure of the increasing needs of the city, is constantly tempted to alter or add to the structure. It will show a strange lack of civic pride if the Manor Hall Association, the Scenic and Historic Preservation Society and other conservative agencies which are at work do not soon succeed in placing the building entirely beyond the reach of vandalism.

Need of Foresight.

One great obstacle to the rescue of these buildings and sites is their enhanced value, due to the growth of the cities in which they are located. Undertaken a generation ago, these enterprises would

not have cost so much; but that is no reason why they should not be undertaken now before they become altogether impossible. We sigh at the lack of foresight of our ancestors and smile at the builders of the City Hall of New York, who made its southern face of marble but its



PHILIPSE MANOR HALL.
(Built 1682.)

rear of brick, in the belief that the city would never extend north of it. But hind-sight is vastly more perspicacious than foresight, and perhaps it is fortunate that it is so. If the unsophisticated Reckgawawancs who dealt with Director-General Minuit that May day in 1626 had ever imagined that land on the corner of Wall and Broad streets would sell for

\$330.70 a square foot, it is doubtful if they would have sold the whole of Manhattan island to the Dutch at a price that would now buy only about ten square inches, and sachems in breech-cloths and feathers instead of sachems in tailor-made suits and silk hats might still be governing this domain.

Wisdom based on retrospect should be careful not to vaunt itself unless it applies its lessons to the present and the future; but we think that the present state of public sentiment on many of these subjects is sufficiently advanced beyond that of a generation ago to warrant some self-gratulation. We cannot retrace our steps and restore the Col-

lect Pond, on the site of which the Tombs prison stands, or the little lake called Sunfish Pond, which once diversified the landscape, and afforded piscatorial amusement at 32d street and Lexington avenue, where the unsightly car



VISTA IN GRAMERCY PARK.

stables now stand. We cannot go backward and recover St. John's Park, with its noble trees, which was sold by its private owners in 1867 to the Hudson River railroad for the site of a freight depot, or reclaim the great section of the City Hall park which was alienated to the United States Government three years later for the site of an architecturally most uninteresting postoffice. But it is safe to say that public sentiment would not tolerate for a moment the suggestion to part with such areas to-day. It is as impossible to conceive of our city fathers selling half of Madison square to the United States Government for a new Sub-Treasury, as it is to imagine the private owners of Gramercy park selling that charming enclosure to a street car company for a power house or storage barn. Public sen-

timent has been so cultivated during the past 25 years and there are such strong conservative influences at work in organized societies for municipal improvement that we are passing out of the state of indifference to amenities such as these and taking a most wise and proper thought for the future.

Suburban Parks for New York.

The preservation of the Palisades, to which allusion has been made, is a conspicuous illustration of taking Time by the fore-lock instead of by the fet-lock. To-day, the Palisades area may be called suburban. Fifty years from now it will be urban. New York is growing rapidly northward along the Hudson valley; Jersey City pushing northward along the valley west of the great trap-rock buttress; and half a century hence, the Palisades park, with its beautiful riparian drive, will be in the midst of the greatest aggregation of urban humanity on the face of the globe. Then, when property is worth—how much dare we say per acre?—benedictions will be spoken upon the names of the men and women, the commissioners and societies, the legislators and governors, who to-day have reserved that picturesque section for the delight of future generations.

The American Scenic and Historic Preservation Society hopes next winter the legislature will act favorably upon the proposition for the acquisition of Watkins Glen for a state reservation. Although this famous glen may be classified as rural scenery, it would be rash to predict that it would not some day lie within the limits of a thriving city; but, granting that it may always remain rural, such landscape features have their influence on neighboring and distant communities. If the inhabitants of a city ten, twenty or fifty miles away from a beautiful landscape or remarkable natural formation can be induced to visit it frequently, to study it, enjoy it and come to love it, the æsthetic culture which they have gained will inevitably express itself in some form in their own city life. The art instinct has been aroused and the eye and the mind cultivated, and they will not be content with unsightly and objectionable environments at home.

The State makes large contributions annually for the encouragement of agriculture by its appropriations to county agricultural societies for the exhibition of fat cattle, large chickens and big

cabbages; and why should it not appropriate fifty or a hundred thousand dollars for the gratification of the æsthetic instinct which calls for a free park that shall be thrown open not only to the

farmers, but to the residents of neighboring cities and the still greater traveling public. The deterrent effect of a small admission fee, such as is charged at Watkins Glen, is greater than is generally imagined. According to the reports of the Niagara Falls State Reservation Commission, the number of visitors to Niagara quadrupled within the first year after the reservation was thrown open to the public. In 1888, the number was estimated at 300,000 and in 1900 at 750,000. Last year about 15,000 persons



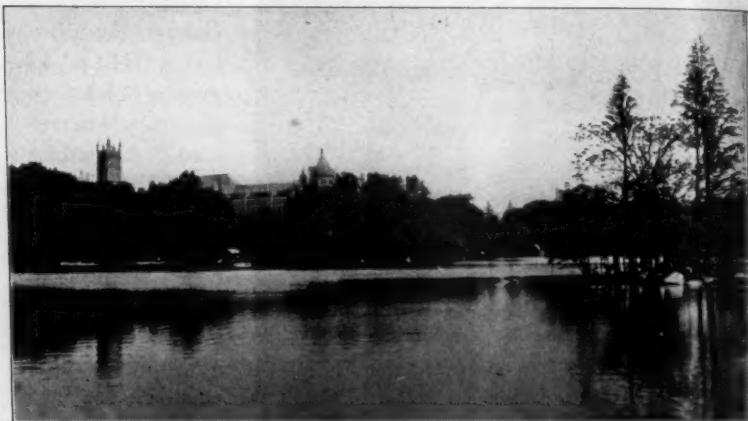
A SCENE IN WATKINS GLEN.

(Schuyler Co., N. Y.)

paid a half dollar apiece to enter Watkins Glen, not counting the guests of the hotel, who paid nothing. Taking this figure and the experience with Niagara as a basis, it is not difficult to form a rough

estimate of the extent to which the educational and æsthetic value of Watkins Glen might be multiplied by its conversion into a state park.

Next to the preservation of areas of natural attraction comes the adornment of artificial reservations and avenues. The protest which went up against the destruction by the rapid transit contractors of the double row of trees which gave Broadway, north of Fifty-ninth street, in New York city, its characteristic charm was an expression of the most natural and commendable jealousy of the City Beautiful. The protest of the Scenic and Historic Preservation Society against the defacement of a beautiful hill in Central Park.

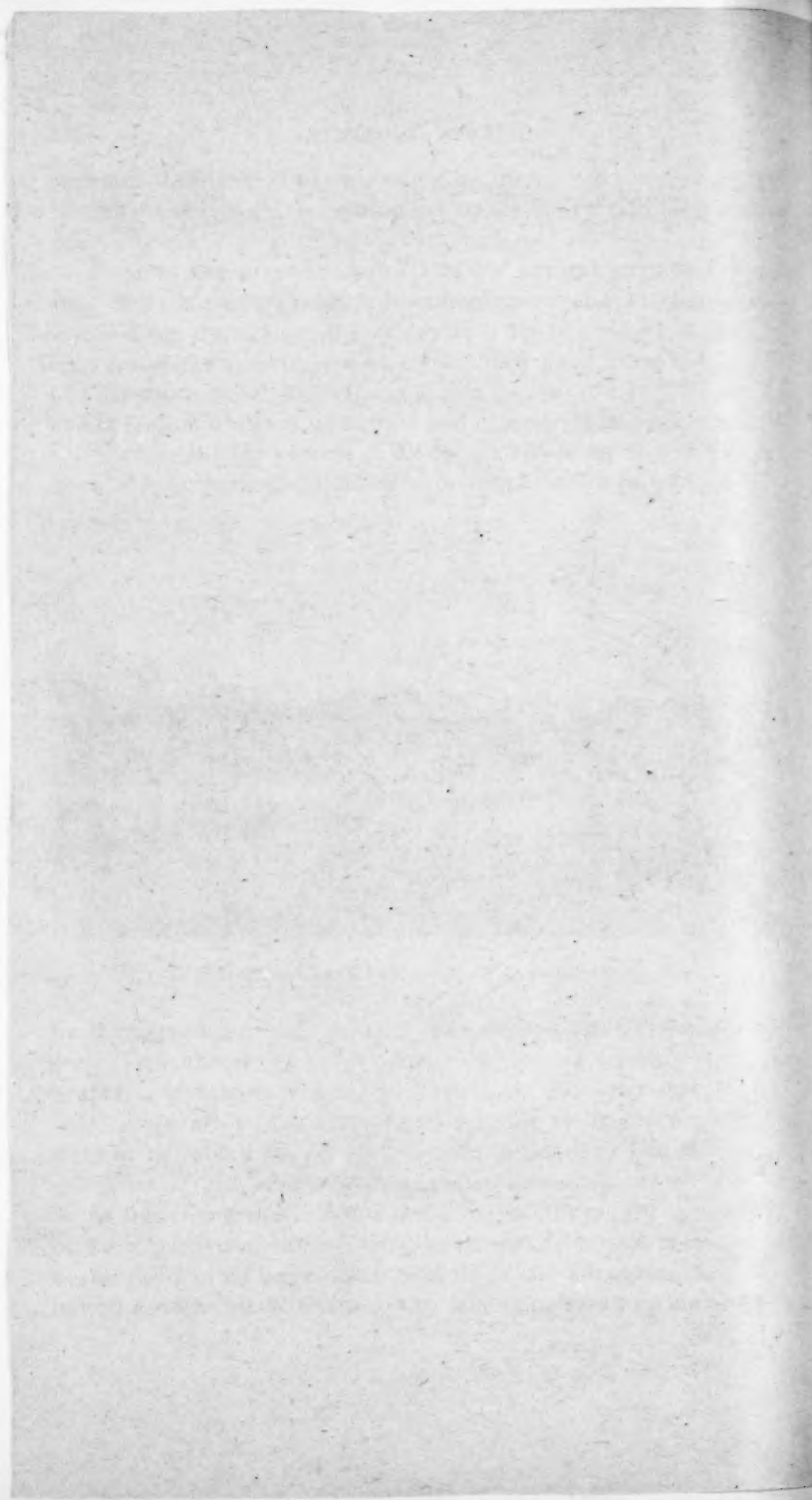


A NATURAL LAKE PRESERVED IN CENTRAL PARK.

by the same hands was another such expression. The citizens of New York, bereft of nearly every feature of natural landscape beauty, are jealous of every rock and tree and open space that is left. They are weary of paying for parks to be given away, for trees to be rooted up, for rocky knolls to be blasted to pieces.

Susceptibility of Children to their Surroundings.

In this connection, a word should be said in regard to the effect of trees, parks and sightly views upon children. The æsthetic education of a child begins, not when he is old enough to study art, but as soon as his senses begin to take cognizance of his environ-



ments. Surround a child with beautiful paintings, draperies and furniture and he will grow up to love them. Point out beautiful buildings to him as you walk along the streets with him, and he will quickly learn to discriminate in architecture. His love of trees, flowers and grass will instinctively manifest itself if he has access to parks, fields and woods. A young father, mother and child lived for six years close by Central Park, in which the mother and child spent several hours almost daily. Six months ago they moved to a new residence on Murray Hill, a mile from the Park, on an avenue devoid of trees. Since then the child, only six and a half years old, has over and over again expressed a longing for what she calls "the dear old park." This is a concrete illustration of the susceptibility of children to landscape impressions, which is confirmed by the experience of many.

Every movement for the beautification of municipal environments should take into consideration, not only the pleasure and gratification of the adult population, but the mold which is daily being given to the plastic minds of the children, into whose hands the destinies of the city will some day fall.

What There Is in a Name.

The society to which we have so frequently alluded in this article has entered a new field of municipal art in its department of nomenclature. It disagrees with the charming Capulet, who, in her specious argument with the Montagu, held that there was nothing in a name. On the contrary, it believes that the right name in the right place is essentially an ornament, and that a name appropriately bestowed upon a great thoroughfare, reservoir, bridge, or other important structure, can be made to possess all the attributes of a decorative monument. The true monument does something more than to mark a location or perpetuate a name. It possesses beauty of form and arrangement, it harmonizes with its surroundings and it appeals to the imagination. A milestone is an object of utility, but its usefulness is exclusively geographical. Numerical street names are useful, and perhaps indispensable for the majority of subordinate thoroughfares in a great city, but they afford no stimulus to the imagination. "Twenty-seventh street" is the first street north of Twenty-sixth street and the first street south of Twenty-eighth street, and nth-

ing more, so far as the name is concerned. But "Wall street"—what a difference! What a train of thought such a name sets up—a little Dutch settlement of the southern point of Manhattan Island; a wall of strong, pointed palisades across the island to keep out the Indians; the primitive life of the incipient metropolis, which then lay below the latitude of Trinity Church—and a host of other historical suggestions. Or "Maiden Lane," whose depression below the level of adjacent streets, in addition to its name, recalls the days when a little tree-shaded stream rippled merrily between grassy banks and afforded a delightful stroll for the pretty Dutch maidens and their not altogether unpoetic swains. On the northern side of Croton Point, Hudson river, is a crescent-shaped sandy beach which has one of the most exquisitely poetic names known to the writer. It is called "The Mother's Lap," or, more briefly, "The Lap," an appellation derived, it is said, from the Indians' designation of their favorite place for beaching their canoes. Could anything be more expressive of the combined ideas of rest, protection and safety for these children of Nature than "The Mother's Lap?"

A Protest against Larcenous Innovations.

It is hardly necessary to prolong the argument to demonstrate that there is something in a name, Juliet's assertion concerning the rose and its fragrance to the contrary notwithstanding. In its annual reports to the legislatures of 1900 and 1901, the American Scenic and Historic Preservation Society has made a strong plea for a suggestive nomenclature. It holds that the principal streets, bridges, reservoirs, parks and public buildings can be made to epitomize a city's history and perpetuate the memories of famous men and events or physical characteristics by means of appropriate titles intelligently selected. It also protests against the spirit of "larcenous innovation" which tends to obliterate time-honored names. While it concedes that in exceptional cases, like that of Sing Sing, (recently changed to Ossining on account of undesirable association with the notion of prison life), a departure from ancient nomenclature may be warranted, it holds that such changes should not be made from a light fancy or passing enthusiasm. Many of the oldest streets in New York have been rechristened in times of great political excitement as an evidence

of resentment against some obnoxious regime. Liberty street, formerly Crown street, and Pearl street, formerly Queen street, may be cited as illustrations of this class. Mercenary motives have led to many other changes, such as that suggested, but happily not consummated, a few years ago by those who could not see in the word "Bowery," so delightfully redolent of the smiling farms that once lined that famous thoroughfare, anything more suggestive than the once malodorous reputation of certain notorious sections of the East side. The tendency to yield to waves of temporary popularity is illustrated by the proposition, made just after the Spanish war, to change Elm street to Dewey avenue, in honor of the hero of Manila bay. The enthusiasm over Dewey having somewhat subsided, the city fathers proposed this year to call it Lafayette avenue—duplicating a name already in the vocabulary of the streets of Brooklyn borough. By next year, they may have settled down to the conclusion that it is wiser to leave it as it is. Perhaps the greatest value of these old names is reached when, like the Bowery, or Water street, (originally on the waterfront), they no longer represent existing physical conditions, but recall those which time and the march of "improvements" have changed.

No less important than the perpetuation of old names is the bestowal of appropriate new ones. In this direction, the Scenic and Historic Preservation Society now has open a public competition for the best names suggested for the four East river bridges already built or planned to be built in the near future, in the hope that these elaborate works, costing millions of dollars, may receive titles becoming to the importance of the structures and the dignity of the city. At present, New York has but fourteen bridges across the East river, Harlem river and Spuyten Duyvil creek, where she would have sixty or seventy if her bridges were as close together as the bridges of Paris. Some day, adequate provisions will be made for dry-shod communication between Manhattan, the mother borough, and her children, as well as between her and her neighbors on the Jersey shore, and then New York will be a city of many bridges. If such societies as the one of which we write, the Municipal Art Society, and kindred organizations, can have their way, these great works with their beauti-

ful architecture, their sightly approaches and their suggestive names, will materially contribute to the making of our City Beautiful.

GROWTH OF CITIES IN THE UNITED STATES:

1890—1900.

BY ADNA F. WEBER.

Six months constitute a short period in which to expect a statistical office to complete a count of 76,000,000 people, to classify them in cities, towns, villages, etc., and publish comprehensive tables of results—even with the assistance of ingenious electrical tabulating machines like those in use in Washington. We shall, therefore, be obliged for the most part to confine our inferences as to the rate of urban growth in the latest decade to such deductions as can be drawn from the Census Bulletin containing the statistics of population of the cities of 25,000 or more inhabitants. The results may be checked and supplemented by the Bulletins treating the growth of population in the individual commonwealths.*

Brushing aside as devoid of interest to the general reader the rivalries of various localities for superior rank of rapid growth of population, we have to consider questions like these: Are cities growing more or less rapidly than in earlier decades? Are people still migrating from the rural districts to the cities; and if so, at what rate as compared with other years? Are villages still decaying while population crowds the metropolitan cities, or is the tendency away from the great centers toward suburban villages and cities?

Urban Growth Less Rapid.

To the first question a definite answer can at once be given. Urban growth between 1890 and 1900, measured by the progress of 159 cities of 25,000 inhabitants and upward, was not nearly so great

*Since this article was written the Census Bureau has published Bulletin No. 70, on "Urban Population." The later and more complete statistics contained in this Bulletin do not at all change the inferences here drawn from the earlier publications.

as in the preceding decade, 1880 to 1890. In fact, the rate of growth was fully one-third less, being 32.5 per cent. in 1890-1900 as contrasted with 49.5 per cent. in 1880-90. Some diminution in the mere rate of growth might have been expected, but so large a falling off is surprising. What is even more striking is the fact that the growth in actual numbers between 1890 and 1900 was smaller than that of 1880-1890, the two increments being respectively 4,839,136 and 4,921,562.

From facts like these some persons have hastily jumped to the conclusion that the movement of population from the villages and rural districts to the cities has ceased. From several newspaper editorials of this tenor, I select the following example:

"Census bureau bulletins on the population of the cities of the United States show that the great rush of people from country and suburban points to the large towns has been halted. . . . During the last decade the cities have been well supplied with labor. The countryman and the foreigner have been absorbed, and the cities have apparently got down to a firm basis of growth. But better than that, the splendid increase in the value of farm products during the past four years, the increased advantages of sticking to the soil, and the many new openings for the farmer to invest his money profitably at home, have given the young man in the country a good reason why he should stay there. He has no longer to go to the city to make a livelihood. Hence the gradual halting of the gravitation toward the big cities. The 159 towns of the United States embraced in the current census bulletin show an increase of 32.5 per cent. during the last decade, or about *the average increase that will be shown for the entire country by the present census*. More than ever before in our history the city and the country are marching side by side and developing together. The balance has been struck and growth has become normal."

The fallacy in this reasoning is exposed by the words that I have italicized, namely, the assumption that the relatively low rate of increase of the city population (32.5 per cent.) is about the rate of the whole country. Until very recently, indeed, the decennial rate of increase of the country's population did exceed 30 per cent., but in 1880-90, the rate was 25 per cent. and in the latest decade it has fallen to 21 per cent. Consequently the cities are still growing 1 1-2 times as rapidly as the country at large; and it is by no means certain that "the balance has been struck and growth has become normal."

But the quotation is useful as indicating the proper method of estimating the relative growth of cities. Pursuing the method of comparing the urban rate of growth with the general rate, let us examine the following table:

GROWTH OF CITIES.

389

	North. Atlantic.	South. Atlantic.	North. Central.	South. Central.	Western.	Total U. S.
(a) ENTIRE POPULATION.						
Number, 1900.....	21,045,748	10,445,486	26,335,243	13,687,901	4,091,349	75,605,727
Number, 1890.....	17,401,545	8,857,920	22,362,279	10,972,893	3,027,613	62,622,250
Increase 1890-1900—						
Number	3,644,203	1,587,566	3,972,964	2,715,008	1,063,736	12,983,477
Per cent.....	20.9	17.9	17.7	24.9	35.1	20.7
Increase 1880-1890—						
Number	2,894,138	1,260,723	4,998,168	2,053,522	1,259,916	12,466,467
Per cent.....	19.95	16.59	28.78	23.02	71.27	24.86
(b) CITIES OF 25,000 IN 1900.						
Population, 1900.....	10,098,696	1,302,528	6,071,861	1,188,361	1,033,179	19,694,625
Population, 1890.....	7,585,202	1,091,221	4,482,829	939,790	756,447	14,855,489
Increase 1890-1900—						
Number	2,513,494	211,307	1,589,032	248,571	276,732	4,839,136
Per cent.....	33.1	19.3	35.4	26.4	36.5	32.5
Increase 1880-1890—						
Number	1,953,200	274,860	2,028,502	295,205	369,795	4,921,562
Per cent.....	34.6	33.6	82.6	45.7	95.6	49.5
Rate of city growth compared with growth of pop'lat'n taken as 100—						
1890-1900	158	108	200	106	104	157
1880-1890.....	173	203	296	198	134	199

Bulletin No. 70, published July 11, defines the urban population as the population of towns of 4,000 or more inhabitants and states the rate of increase since 1890 to be 36.8 per cent., as compared with 20.8 for the entire population, or as 177 to 100. The proportions in the several divisions of states, as arranged in the above table, would be as follows:

1890-1900.....	168	180	220	160	131	177
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First, is it to be noted that the figures here given for the population of the United States in 1900 are not complete, since, in order to be comparable throughout the several geographical divisions with the census figures of 1890, they must not include Alaska, Indian Territory and Hawaii.* There are no cities having 25,000

	1890.	1900.
Forty-nine States and Territories.....	62,622,250	75,605,727
Alaska	32,052	63,441
Indian Territory.....	180,182	391,960
Indian Reservations.....	145,282	.....
Hawaii	89,990	154,001
In military and naval service abroad.....	.....	89,670
Total.....	63,069,756	76,304,799
The increase is 13,235,043, or 20.9 per cent.		

*The total population of the United States, exclusive of Porto Rico and the Philippine Islands, was 76,304,799 in 1900, and 62,979,766 (with Hawaii, 63,069,756) in 1890, distributed as follows:

inhabitants in either Alaska or Indian Territory and the single Hawaiian city of this grade (Honolulu, 39,306) has for some unexplained reason been omitted from the Census Bulletin of such cities. It is therefore allowable to omit these territories from consideration of the present problem and base our conclusions upon the table as above.

Secondly, to repeat a statement made in an earlier paragraph, the rate of growth of the 159 cities fell from 49.5 per cent. in 1880-1890 to 32.5 per cent. in 1890-1900, while the rate of increase of population in the entire country fell only from 24.86 to 20.7 per cent. In the former decade the cities grew twice as rapidly (199 to 100) as the country at large, and in the decade just closed only 1 1-2 times as rapidly (157 to 100).

Causes of Decrease.

Third. This check to the concentration of population is in large part a result of the bursting of the "booms" in Western cities. In the decade 1880-1890, the cities in the North Central States increased 82.6 per cent. in population; in 1890-1900, only 35.4 per cent.; and in the Western division, the rate fell from 95.6 to 36.5. But in the North Atlantic division the rate declined only from 34.6 to 33.1. In every one of the nine States in this division, the increase in actual numbers from 1890 to 1900 was larger than in the preceding decade, although the rate declined slightly in five of the States. In the Western division, Montana and Oregon were alone in having a larger increase in the city population in 1890-1900 than in 1880-1890, and in them the rates of increase declined very noticeable. And if the territory west of the Missouri river be isolated, it will be found that its city population increased about 20 per cent. in the recent decade as compared with over 100 per cent. in 1880-1890.

Such a contrast is not difficult of explanation, for it is generally known that the increase of population in 1880-1890 in such States as Kansas and Nebraska was a mushroom growth. This was particularly true of the cities which were built up on a much larger scale than the tributary territory required. The census of 1890 was taken almost at the height of the "boom" period and it is even said that the census was in some places fraudulently inflated. Such must have been the case, for example, in Omaha with a population of

30,518 in 1880, 140,452 in 1890 and 104,555 in 1900.* The grand result is that very few of the larger cities in the West (St. Louis and St. Joseph, Mo., being exceptions) show anywhere near the growth in 1890-1900 that they did in 1880-1890.

In the South also the rapid growth of urban population of 1880-1890 came nearly to a full stop.

In both of the great divisions, South Atlantic and South Central States, the urban rate of increase in the closing decade of the nineteenth century but slightly exceeded the general rate, whereas in the ten years from 1880 to 1890 the urban rate was twice as large as the average for the entire population of the States. This is more surprising when one recalls the extensive development of manufacturing industry that has recently taken place in the South. Here apparently is one instance in which the growth of manufactures has not promoted the growth of cities.

But the evidence on this point is not complete for the reason that our present definition of city is, for want of more complete statistics, a place containing no fewer than 25,000 inhabitants. Now the great Southern seat of the cotton manufacturing industry is in North and South Carolina, both of which States have in recent years passed Maine, New York, New Jersey, Pennsylvania. North Carolina does not contain a single city of 25,000 people and South Carolina only one (Charleston). The numerous cotton mills in these States are scattered through small towns or villages. Just how populous these embryo industrial centers are cannot be determined until we have more census figures; but according to the reports of the North Carolina Bureau of Labor Statistics they do not appear to average more than a few hundred souls. From the Census Bulletin on Georgia, which ranks after North Carolina among Southern cotton manufacturing States, the writer has compiled a table which shows that the growth of industry has not favored the cities of 5,000, thus:

	Population.		Increase, 1890-1900.	
	1890.	1900.	Number.	Per cent.
(3) Cities of 25,000	142,022	183,557	41,535	29.2
(10) Cities of 5,000-25,000.....	86,737	98,888	12,151	14.0
(13) All places of 5,000	228,759	282,445	53,686	23.4

*Part of the decrease between 1890 and 1900, however, may be accounted for by the rapid rise of South Omaha, from 8,062 in 1890 to 26,001 in 1900.

The growth of manufactures did not therefore build up these smaller cities, for their increase was only 14 per cent. as compared with 20.6 per cent. for the entire State. Nor did the three larger cities (Atlanta, Augusta, Savannah) grow as much in 1890-1900 as in the preceding decade, the respective rates of increase being 29.2 and 57.7; while the population of the State as a whole increased by 20.6 per cent. in 1890-1900 as compared with 19.1 per cent. in 1880-1890. In Alabama the results are similar. In this section of the country, the growth of manufactures has not as yet produced the concentration of population that is so much discussed in Europe and the Eastern commonwealths of our country.†

In the North Atlantic States quite another condition of affairs is disclosed by the table. In that division the urban population increased by 2,513,494 in the latest decade as compared with 1,953,200 in 1880-1890; whereas in the remainder of the country the urban population increased only by 2,325,642 in 1890-1900 as contrasted with 2,968,362 in 1880-1890. The ratio of city growth to the general growth of population fell only from 173 to 158, while in the South Atlantic States it fell from 203 to 108. All through the Northern States, in fact, the concentration of population in cities is still proceeding very rapidly. Let anyone who thinks that the capacity of cities for absorbing the rural population has come to an end in the United States reflect upon the fact that of New York State's increase from 1890 to 1900 (1,270,159) no less than 90 per cent. was in the twelve cities of 25,000, leaving only 127,000 for the growth of all the smaller cities and towns, villages and rural districts. The metropolis alone absorbed three-fourths (944,611) of the entire gain, counting the annexed territory as a part of the city in both census years.

Résumé.—Cities of 25,000 inhabitants and upward grew much less rapidly in 1890-1900 than in the preceding decade. The falling off in their rate of increase was much greater than that of the country at large, with the result that the concentration of population progressed at a diminished rate. The cause of this lessening concentration was the collapse of a "boom" period in the Western, and possibly in the Southern, cities which had inflated their popu-

†Later statistics, however, indicate an exceedingly large increase in the urban population (towns of 4,000+) of North and South Carolina.

lation in 1890. The spread of manufacturing industry to the small towns of the South was also a factor. But on the other hand, the Northern cities grew with very little abatement from the rate of 1880-1890.

The Decline Not Permanent.

But because the rate of concentration was checked in the latest decade it does not follow that the check is a permanent one. Such checks have occurred before in the history of the United States and have been followed subsequently by concentration at an increasing rate. This is shown in the following table, previously published in "The Growth of Cities" (page 24) and now brought down to date:

DECIMAL RATE OF INCREASE OF THE POPULATION.			RELATIVE RATES OF INCREASE		
		† 124			† 124
	United States.	Urban Population.*	Large Cities.	United States.	Urban Population.*
					Large Cities.
1800-10.....	36.38	69	51.1	1800-10.....	100
1810-20.....	33.07	33	36.4	1810-20.....	100
1820-30.....	33.55	82	52.0	1820-30.....	100
1830-40.....	32.67	68	61.6	1830-40.....	100
1840-50.....	35.87	99	82.2	1840-50.....	100
1850-60.....	35.58	75	60.8	1850-60.....	100
1860-70.....	22.63	59	46.9	1860-70.....	100
1870-80.....	30.08	40	38.8	1870-80.....	100
1880-90.....	24.86	61	47.7	1880-90.....	100
1890-1900....	20.7	37	33.8	1890-1900....	100
					190
					100
					110
					155
					188
					126
					171
					207
					129
					196
					163

While the rate of growth of the larger cities was lower than in any previous decade, the same is to be said of the rate for the whole country. The ratio of the first rate to the second (33.8 to 20.7) was as 163 to 100; and while in 1880-90 this ratio was as 196 to 100, or 196 for short, in the preceding decade the ratio was 129. Again, in 1840-50 the ratio was 126.

As a matter of fact there has been a rhythmical movement about the concentration of population in the United States. No writer has ever called attention to it, but it appears very distinctly in the next to the last column of the above table: *the rate of concentration rises and falls in each alternate decade*. In 1810-20 the rate falls from 190 to 100; in 1820-30, it rises to 244; in 1830-40, it falls to 208; in 1840-50, rises to 276; in 1850-60, falls to 213; in

* Towns and cities having 8,000 or more inhabitants at each census.

† The 124 cities which in 1890 contained 25,000 or more inhabitants each.

1860-70, rises to 261; in 1870-80, falls to 134; in 1880-90, rises to 246; and in 1890-1900, it falls to 177. It were idle to prophesy what the rate is likely to be in the present decade, 1900-10; certainly, no one is justified in predicting a continued falling off in the rate of concentration simply because such a decline has occurred in the decade covered by the Twelfth Census,—unless one can discover new forces at work which promise to effect a decentralization of population.

Is such a force to be found in the suburban trolley? No more important question than this can be proposed; but the time is as yet too early to formulate an answer. The Massachusetts census of 1895 showed that the most rapidly growing cities were the suburbs of Boston. Since then, trolley lines have been greatly extended until they form almost a network of rapid transportation lines between municipalities and banish much of the isolation of rural and village life. Later, when the results of the census shall have been published in detail, it will be possible to determine the effects of these new transportation facilities upon the distribution of the population. For the present, the following table,* showing the distribution of population in New Hampshire will have to serve as indication of what is, apparently, the tendency throughout the United States:

POPULATION.			DISTRIBUTION OF EACH 100 INHABITANTS.				
	A	B	C	A	B	C	D
1850.....	113,506	97,628	106,842	1850....	35.69	30.71	33.60 100.00
1860.....	126,235	97,815	102,020	1860....	38.71	30.00	31.29 100.00
1870.....	137,440	92,314	88,555	1870....	43.18	29.00	27.82 100.00
1880.....	167,338	94,601	85,052	1880....	48.23	27.26	24.51 100.00
1890.....	207,455	93,352	75,723	1890....	55.10	24.79	20.11 100.00
1900.....	243,726	94,228	73,634	1900....	59.22	22.89	17.89 100.00

A Towns of 2,000 or more inhabitants in 1890.

B Towns of 1,000-2,000 inhabitants in 1890.

C Towns of less than 1,000 inhabitants in 1890.

D New Hampshire.

We may regard these three classes of towns as the cities, villages and rural districts of New Hampshire. Now it appears that the latter (C) lost less ground in 1890-1900 than in the preceding decade, while the villages (B) actually gained 900 inhabitants. This gain, however, was not sufficient to enable the villages to

* From The Nation, Oct. 25, 1900.

maintain their ground and they now contain only 22.9 per cent. of New Hampshire's population as contrasted with 24.8 in 1890.

It is also clear that in 1880 a similar check to the depopulation of villages and farms was revealed by the census. This check affected the population of the entire country, as has been already pointed out; and it strengthens the hypothesis that an important factor in the recent check to concentration of population was the industrial crisis. The long depressions of 1873-79 and 1893-97 have apparently been more severely felt by the cities than by the smaller communities.

Among the larger cities of the United States the rate of growth in the last decade of the nineteenth century has been surprisingly uniform, as is revealed in the following table from Census Bulletin No. 11:

	No. of Cities.	Population 1900.	Increase from 1890.	
			Number.	Per Cent. 1880-1890.
Cities of 200,000.....	19	11,795,809	2,901,881	32.6
Cities of 100,000-200,000.....	19	2,412,538	603,882	33.4
Cities of 50,000-100,000.....	40	2,709,338	642,169	31.1
Cities of 25,000-50,000.....	83	2,839,933	706,524	33.1
Total.....	159	19,757,618	4,854,456	32.6
				49.5

While in the decade 1880-90, conspicuous differences appear in the various rates of growth, in the latest decade such differences are almost infinitesimal; the growth is on the contrary, remarkably uniform throughout the four classes of cities. The largest cities ten years ago were being outstripped by the middle-sized cities, but that is no longer true. Judging from these statistics, one would say that modern Americans entertain the aspiration that Milton expressed when he wrote:

"Towered cities please us then,
And the busy hum of men."

But our metropolitan cities have assumed such gigantic dimensions that the evils of congested population are more and more forcing themselves upon public attention. The problem of housing such masses of men is bound to create trouble unless resolutely attacked. Fortunately our great metropolis has at last awakened to a sense of danger and has begun work on the only effective solution of the problem; namely, rapid transit from the business center to the residential outskirts. Adequate space for the housing of the people lies at the basis of all reforms. Other remedies are mere palliatives.

ANOTHER VIEW OF MUNICIPALITIES AND VICE.

[The December issue of MUNICIPAL AFFAIRS contained an article entitled "Municipalities and Vice." The writer's thesis was that in the present state of public opinion it is inadvisable to attempt to root out prostitution and that the efforts of city authorities should be devoted to the suppression of its outward manifestations and the protection of all citizens from involuntary contact with it, especially children and the poor in tenements. How this may best be done is a question of means to ends, as to which experience and experiment alone can determine. In other words, public sentiment does not demand that governmental agencies be used to abolish prostitution *per se*; and it certainly is not for a few, either within the administration or without, to say what is moral and undertake to enforce their views by law. Hence, until a majority are persuaded that prostitution ought to be wiped out by *governmental agency*, other means must be used to attain this end. However, there are two sides to this question, and we take pleasure in publishing the following article. The author, who has given social problems unusual thought and study, and who is thoroughly alive to our municipal needs, has requested that her name be withheld. It is not our custom to print controversial articles without signatures, but as the article called in question was written by the editor and as MUNICIPAL AFFAIRS is an open forum, we make an exception.—Editor.]

Conclusions are always wrong when any question involving human conduct is argued without regard to its moral aspects, for the simple reason that the premises are false. Morality is the most important factor in all questions of human conduct, and cannot therefore be ignored without destroying the force both of argument and conclusion.

The interesting article in the issue of MUNICIPAL AFFAIRS for December, 1900, upon "Municipalities and Vice," notwithstanding the value of some of its recommendations, is open as a whole to this condemnation, and the sum of its teaching is consequently wrong, being based on false premises.

Let us now take up the suggestions of this article *seriatim*, and attempt to add something to the answer of the question, "What should be the attitude of the city government—the people acting collectively—towards vice, and principally towards prostitution?"

Under the head of "Attempts at Remedies" are enumerated the various methods of dealing with the problem in Europe and America, and the two illegal methods of regulation adopted in certain American cities, "periodic fines" and "localization," are both very justly condemned. The reasons given against both systems are excellent, so far as they go.

But nowhere does the writer touch on the fundamental and unanswerable objection to both systems, viz.: the recognition that prostitution is a *necessary trade*.

The author appears to condemn the system of "Public Regulation," stating that it "has been only moderately successful even in Europe." He proceeds: "Medical inspection—perhaps the principal characteristic of the system—does lessen, but even when enforced does not entirely prevent it.* Even with the strong police power which foreign cities possess, it is extremely difficult to enforce the requirements of universal inspection, and there are always some who will not obey, preferring to take the chance of being found out."

The above reference to the Continental system is so far favorable that it would inevitably be accepted as an argument in its behalf by those who have not studied the subject, and herein lies the danger of the article under discussion. There is a mass of testimony in existence, however, showing that the Continental system, so far from having been even "moderately successful," has not only failed to diminish disease and check prostitution, but has so corrupted the moral sense of the communities which have adopted it that it has been the cause of an increase both of disease and vice. The reader is referred for confirmation of this statement to the following original sources:

From "An Inquiry Into the Causes of the Great Sanitary Failure of the State Regulation of Social Vice." Joseph Edmondson, Heath Avenue, Halifax, Yorkshire, 29th January, 1897:

The conspicuous failure of the sanitary regulation of prostitution in India, as set forth by copious quotations from official and other trustworthy documents in a recent pamphlet, strikingly corresponds with experience elsewhere. A body of

*The author is referring in the above sentence, of course, to venereal disease, and not to prostitution, since the whole system of public regulation is aimed not at the destruction of prostitution, but only to render it safe by the destruction of disease.

writers on the Continent of Europe, so fully acquainted with the system down to its minutest details that they may well be termed experts, and whose writings may be taken as "text-books" of the art of regulation, abundantly illustrate the fact of such failure is *essentially general*, and not merely *local*. Some of these writers belong to the medical profession and occupy important positions in the working of the system, while others are administrators who do not pretend to any medical skill, but who have a thorough and practical grasp of its operations and results. One of the latter, M. Lecour (for about fifteen years the chief of the *Police des Moeurs*, who carry out the system in Paris), summing up in 1870 the final results of eighty years' experience in that city, wrote: The administration has "redoubled its activity * * * and it has finally succeeded in maintaining the registered public women in a satisfactory sanitary condition." And yet "prostitution is increasing and becoming more dangerous to the public health."¹ The writings of the other experts, though not so outspoken, are uniformly incompatible with anything but a precisely similar state of things in the cities of which they individually speak, viz., *increased and increasing danger, side by side with increased stringency and more perfect arrangements.* * * *

Even after years of unsuccessful result it was still hoped that with increased care and greater stringency the desired end might be attained. But there can be no doubt that the outcome was a failure.* * * *

In Paris the efforts to form the *cordon* all-inclusive have been prodigious, and yet, according to M. Lecour, eighty years' experience had not devised means by which more than one-eighth of the estimated number of prostitute women could be brought within the "riskless" enclosure. This difficulty and the means, if any, by which it may be overcome, form the great theme of all the experts. Though differing somewhat in their estimate of its precise extent, the Continental experts are absolutely unanimous as to their ridiculously small success in this, the merely preparatory step towards the attainment of their object. Dr. Mauriac writes so recently as 1896: Although "the medical inspection of licensed brothels and of regulated prostitution * * * is conducted by a numerous, well-trained and experienced staff, how many cases both in Paris and the provinces escape their vigilance! Its efficacy * * * only covers a relatively small number of cases, and this number decreases more and more." * * *

M. Lenaers, speaking from his own experience as chief administrator of the system at Brussels, reported to the city council that "the inscription on the rolls of prostitution is an exceedingly grave and delicate matter when we consider the position in which it places the woman who is the object of it, for while this inscription is a purely administrative act, the object of which is to compel the habitual prostitute to submit to the examination, none the less does it inflict on the woman a patent of infamy and degradation, and exercises a disastrous and fatal influence on her future life." * * * The head of the police in Berlin, in an administrative report for the decade 1881-90, acknowledges that the registration of prostitutes,

¹ Lecour, "La Prostitution à Paris et à Londres," Paris, 1870, p. 225.

² Ibid., p. 254.

³ "Memorandum by the (British) Army Sanitary Commission on the Statistics of Venereal Disease Among British and Native Troops in India for the Year 1892," in Parliamentary Paper No. 313 for 1895.

⁴ "Traitement de la Syphilis," par Charles Mauriac, Médecin de l'Hôpital Ricord (Hôpital du Midi). Paris, 1896, p. 62.

⁵ "Report on the Project for Regulating Prostitution in Brussels," presented to the College of the Burgomasters and Aldermen by M. Lanaers, Commissary of Police, 6th August, 1877.

with its consequences, horribly aggravates their abject condition. * * *

In Hong Kong, too, it was authoritatively stated, while the system was in force, "that the number of women caught under the sanitary regulations has always been, as compared with those left unregulated, insignificant." The same authority also pointed out that the objection of the Chinese prostitutes to submit to the examination was so intense that it could be inflicted only on *the lowest class*, found solely in brothels for Europeans. It was impossible to enforce it in those for Chinese and other Orientals, in which it had to be completely abandoned. * * *

From a publication issued by the British Committee of the International Federation for the Abolition of State Regulation of Vice. Office, 17 Tothill Street, Westminster, S. W. December, 1899. Second Edition, July, 1900:

An "International Conference for the Prophylaxy of Syphilis and Venereal Maladies" was convened in the autumn of 1899, and sat at Brussels from September 4th to 9th. The letter of invitation stated that:

The constantly increasing propagation of syphilis and venereal maladies is become a serious danger for society. It is necessary whilst there is yet time to take measures to attempt to arrest the invading march of this plague. It is with a view of grouping and unifying all efforts that a committee has been formed, and has decided to organize an international conference for the prophylaxy of syphilis and venereal maladies. * * *

The Conference was probably the largest, most complete and most weighty of its kind ever held. The following Governments appointed representatives: Germany, Austria, Bosnia, Brazil, Bulgaria, Chili, Denmark, Spain, the United States of America, France, England, Honduras, Hungary, Italy, Japan, Mexico, Norway, Paraguay, Persia, Peru, Holland, the Argentine Republic, Roumania, Russia, Servia, Sweden, Switzerland and Belgium. These delegates included nearly all the great regulationist leaders of the world. * * *

The following are the six questions which formed the programme of the Brussels Conference, and which accompanied the letter of invitation:

1. Have the systems of regulation, actually in force, had an influence upon the frequency and dissemination of syphilis and venereal maladies?
2. Is the present organization of the medical surveillance of prostitution capable of improvement?
3. Exclusively from the medical point of view, is there any advantage in maintaining the *maisons de tolerance*, or would it be better to suppress them?
4. Is the administrative organization of the police surveillance of prostitution capable of improvement?
5. By what legal measures can the number of women who derive their means of existence from prostitution be diminished?
6. Leaving prostitution out of the question, what general measures can be taken effectually to combat the propagation of syphilis and of venereal maladies?

The debate on the first question (as to the success of regulation in preventing disease) was particularly important, as raising the whole question of the general success or failure of regulation. After nearly two days' discussion no conclusion was come to. The *British Medical Journal* of Sept. 9th, 1899, said:

* Report of Commissioners appointed to Inquire Into the Working of the Contagious Diseases Ordinance, 1867, Parliamentary Paper 118 of 1880, p. 61.

"The sitting was adjourned at 1.35 p. m. (on the second day), no decision of any kind having been arrived at, the discussion having revealed the greatest differences of opinion and the utter absence of any trustworthy data for the formation of sound conclusions."

Another equally important debate arose on the following resolution of Professor Petersen, one of the delegates of the Russian Government, in favor of regulation: "The sanitary surveillance of prostitution is one of the most important means for diminishing the propagation of syphilis and venereal maladies." * * *

The end of the fight on this resolution was that the question was again not put to the vote.

The following were the resolutions actually carried:

1. The Conference desires to see the various Governments use all their powers to suppress absolutely prostitution of girls under age (*en état de minorité civile*).

2. The Conference desires to see the present meeting serve as a basis for the foundation of a society for sanitary and moral prophylaxis, having its centre in Brussels, which will show its vitality: (a) By the creation of a quarterly journal for the publication of reports and papers of interest concerning the said society; (b) By Congressional meetings,

3. The Conference, esteeming that a thorough knowledge of Venereology constitutes one of the most important means for effectually counteracting the spread of venereal maladies, urgently recommends the Governments to ensure the future competence of the Medical Profession in this matter by the institution, in every university, of complete and compulsory courses, the subject of which shall form part of the State examinations. The Conference asks that the examiners may be specialists.

4. (a) It is necessary that orphans should be better protected. For this purpose, the choice of guardians should be guided not only by the desire to defend the material interests of the children confided to their charge but above all by the necessity of assuring their moral welfare.

(b) Whoever has charge of the education of the young ought to apply all his care to the moral development of his scholars; he should carefully instruct them in temperance and in respect for all women, whatever may be their social position.

5. The Conference calls for the utmost severity of the law against *souteneurs* (men living upon the earnings of prostitutes).

6. The Conference asks the Governments to appoint in every country a commission:

(1) To determine the frequency of venereal maladies in the civil population, apart from temporary variations.

(2) To enquire into the institutions actually existing for the treatment of venereal affections; the distribution of hospitals; the number of available beds in the different localities; and to propose the most efficacious means for the treatment of these maladies.

(3) To collect the various opinions relative to the best means of preventing and limiting the spread of venereal maladies in the civil population, and to formulate suitable conclusions on the subject.

7. The Governments are requested to seize every suitable opportunity to call the attention of the public, and above all of young people, to the dangers of prostitution to the health of both sexes, and to the baneful results of venereal diseases.

8. The Conference desires to see the venereal statistics of all countries arranged upon a uniform basis.

When these resolutions are compared with the six questions of the programme, and when it is remembered that a resolution in favor of Regulation was, after discussion, withdrawn, it will be seen how completely the Regulation system failed to obtain the support of the Conference; and further, when the composition of the Conference and the character of those attending it is considered, it is obvious the results are of the most encouraging character, and show how confidence in the Regulation system is decaying among the scientific community of the civilized world.

Mr. Jonathan Hutchinson, the eminent English specialist, said at the Brussels conference above referred to (From the *Inter-State Medical Journal*, U. S. A.):

The resolution (Leaving prostitution out of the question, what general measures can be taken effectually to combat the propagation of syphilis and of venereal maladies?) is specially interesting to me, because I believe it is almost the only one which can be made practical. I believe at present it would be quite impossible to trust anybody with the regulation of prostitution, or to carry such a law out effectually, even if that were possible. * * *

There seems to be great exaggeration as regards the prevalence of hereditary syphilis in England. During the last ten or thirteen years in England, the deaths from inherited syphilis have been greatly reduced in the proportion of from seventeen to twelve, i. e., a reduction of more than a quarter, or nearly a third.¹ * * *

There is a largely spreading feeling in England amongst those who are not religious in favor of the endeavor to advance in our respect for women and our regard for the rights of women of all classes of society, and a desire not to assist in the degradation of any one class as a source of enjoyment to the other. * * *

There is a growing feeling in England on this subject, and I am glad to see that there is in our medical schools, as in all departments of life where educated young men meet, a very great increase of the sense of responsibility in these matters. The state of medical students as regards this is far in advance of what it was a quarter of a century ago, and that feeling extends to our colleges also.

We ought not to do anything which would consign to degradation a large number of young, inexperienced women of that class which specially require sympathy and education. The attempt to establish moral responsibility by attention to temperance, athletics, industry, so far from favoring the degradation of any race, would tend in every way to enable humanity to advance the true interests of our race.

Under the heading "WHAT THE CITY SHOULD DO" the author indorses the recommendations of the Tenement House Commission aimed at the evil of prostitution carried on in tenement houses, and adds a very valuable one of his own, intended for the special protection of young girls. He says: "Possibly it would be wise to provide by statute and police ordinance for fine and imprisonment of any woman under twenty-one years of age who is given to prostitution, of the keeper of the brothel in which she is and of the man

¹ The system of "Public Regulation" has never existed in England except in Garrison towns, and in these it was in force only for twenty-two years, from 1864 to 1886.

customer concerned." There can be no doubt that such a law would have a most salutary effect, except that the punishment should not include a fine. A fine does not prevent evil, and, as the author himself says elsewhere in this article, "is only one degree removed from secret blackmail." A fine acts always as a license fee and permits the offender to repeat his offense, provided he is ready to pay for the permission. Therefore, if the object is to prevent and to stop a certain offense against the law, the person who offends should be put where he cannot repeat his offense. In the case of prostitutes this is especially imperative, because their only means of paying a fine is by money earned by prostitution.

It is necessary to protest also against another recommendation of the author, that every prostitute "might be required to show upon application a card containing her photograph and residence, and a statement, signed by the proper authority, certifying that she was over twenty-one years of age, and that she reported regularly her desire to remain a common woman." This is open to many of the objections already urged against "public regulation," and could not fail to have a most debasing effect upon public morals, for it would be equivalent to the giving of licenses to women over twenty-one to carry on the "trade" of prostitution.

To find the cure for the flagrant evils of public prostitution it is necessary to study its causes. In New York and probably in all American cities they are somewhat as follows:

The foundation cause is of course the "double standard" of morality for men and women, and the widespread false opinion that the indulgence in vice is a necessity for men. Other causes are:

1. The corruption of the police department.
2. The temptations so freely offered to girls and boys and to men; the shows around the crowded neighborhoods, for instance, which stimulate evil imagination, the saloons, etc., which are only another symptom of police rottenness, however.
3. The low moral tone, both of landlords and tenants, the former being ready to share in the profits of vice, the latter being unwilling to protest against it.
4. The love of money and greed of gain.
5. The failure of police and magistrates to deal rightly with men and with women when arrested. The men arrested in "raids" upon

brothels are all discharged upon giving false names and addresses. If they were taken into court and subjected to the public disgrace they deserve, many who perhaps are more foolish than depraved would fear to run the risk of entering brothels, and would thus be saved from both temptation and sin, and the trade would consequently be less lucrative to the women and to their masters.

The women also are wrongly dealt with. Fining only forces them to continue in the life, when the object should be to remove them from it, and to reform them if possible. To fine them is to bind them to it—they have only the one means of earning money—and they pay their fines by past sin, or if some one pays for them, they become more irrevocably enslaved to bad men. It would be better to make no arrests at all than to impose fines on these women. Commitment for six months to a prison would at least be a *punishment*, which the fine is not.

It is not necessary to commit to prison, however, if the women themselves can be persuaded to enter some of the "homes" which are ready to receive them, and where they will be helped to reform and later to find employment. The Magdalen Asylum, the House of the Good Shepherd, the House of the Holy Family, the Salvation Army Home are some of these in New York City.

The police, the magistrates, the institutions should all join in trying to deliver the women from the life of sin, and in trying to reform them. Probation officers and court officials (all women) should be nominated by the various institutions interested in such work to go with the police when arrests are made, and try on the spot to persuade the women to go to one of the homes named, and the magistrates should in such cases suspend sentence, and allow the institutions the opportunity to deal freely with such women. When the offer of such a refuge is refused, the women should be committed to a reformatory, and where they appear to be incorrigible, to prison for the longest term possible.

Police officers should not be authorized to enter brothels except upon the complaint of a householder and accompanied by at least one independent witness—this in order to save them from the temptation to blackmail and the danger of being blackmailed. It is to be remembered that the protection of the moral character of the individual police officer is one of the most important things to

be provided for in any plan of dealing with the subject of prostitution. The methods heretofore employed in New York City, and all systems of license, whether legal or by the use of the fining system, are absolutely demoralizing to the men who enforce them.

Much more severe punishment should be inflicted than is now possible upon the men and women who live upon the earnings of prostitutes, men and women who simply for greed of gain drive the wretched victims to a life which many of them loathe, and which brings them only misery and death.

The whole difficult problem of prostitution involves education in many different aspects, and a large number of invaluable suggestions, both as to the causes and the remedies for prostitution, are to be found in an address on "Rescue Work in Relation to Prostitution and Disease," given at a conference of rescue workers, held London, in June, 1881, by Dr. Elizabeth Blackwell, and republished by her in a collection of "Essays in Medical Sociology" in 1899. From this address the following are extracts:

Let me now lay bare to you the root of the whole evil system, because, as a physician acquainted with the physiological and pathological laws of the human frame, and as one who has lived through a generation of medical practice amongst all classes of the community, I can speak to you with a positive and practical knowledge rarely possessed by women. The central point of all this monstrous evil is an audacious insult to the nature of men, a slander upon their human constitution. It is the assertion that men are not capable of self-control, that they are so inevitably dominated by overwhelming physical instincts that they can neither resist nor control the animal nature, and that they would destroy their mental or physical health by the practice of self-control. * * *

Now I say deliberately, speaking as a Christian woman, that such a statement and such a belief is blasphemy. It is blasphemy on our Creator, who has brought our human nature into being, and it is the most deadly insult that has ever been offered to men. Do not accept this falsehood. I state to you as a physician, that there is no fact in physiology more clearly known than the constantly increasing power which the mind can exercise over the body, either for good or evil. * * *

If you let corrupt servants injure your little children, if you allow your boys and youths to practice self-abuse and fornication at school and college, if you establish one law of divorce for a man and another for a woman, if you refuse to protect the chastity of minors, if you establish brothels, prostitutes, and procurers, you are using the power of the mind over the body for evil. You are, indeed, educating the sexual faculty, but educating it in evil. Our youth thus grow up under the powerful influence of direct education of the sexual instincts in vice; but so far, even in our so-called Christian civilization, we are ashamed to attempt direct education of those faculties for good.

I have made the above remarks as bearing directly on the subject of disease, as well as to call your attention to the proper place which "rescue work" must oc-

cupy in humanitarian work. As prostitution is the direct result of unbridled licentiousness, you may as well attempt to "mop up the ocean" as attempt to check prostitution, unless at the same time the root of the evil, viz., licentiousness, is being attacked. Let it be distinctly understood, however, that I would encourage, not discourage, rescue work. I honor the self-denial and beneficence even of those who cannot see the source of the evil they are trying to mitigate; but I would much more strongly encourage those who, being engaged in this work, do at the same time clearly recognize that the warfare against licentiousness is the more fundamental work; and who, whilst themselves engaged in rescue work, bid God-speed and give substantial encouragement to all others who are directly engaged in the great struggle against every form of licentiousness—against every custom, institution, or law that promotes sexual vice. Such earnest rescue workers are not simply mopping up the ocean, they are also helping by their encouragement of other fundamental work to build up a strong dyke, which will resist the ravages of destructive evil forces. Thus, any efforts that can be made to teach personal modesty to the little boys and girls in our board schools all over the country form a powerful influence to prevent prostitution. Attention to sexual morality in educational establishments everywhere, in public and private schools and colleges, amongst young men and young women, is of fundamental importance. Also efforts to secure decency in the streets, in literature, in public amusements, form another series of efforts which make a direct attack upon licentiousness, and cut away another cause of prostitution. Again, the abolition of unjust laws and the establishment of *moral* legislation form another series of effort, and a vital attack upon the roots of prostitution. Always remember that the laws of a country possess a really terrible responsibility through the way in which they influence the rising generation. Inequality between the sexes in the law of divorce, tolerance of seduction of minors, the attempt to check sexual disease by the inspection of vicious women, whilst equally vicious men are untouched, all these striking examples of the unjust and immoral attitude of legislation will serve to show how law may become a powerful agent in producing prostitution through its direct attitude towards licentiousness. * * *

These diseases are called the diseases of vice, because they spring directly from the promiscuous intercourse of men and women. Syphilis never arises from the single union of a healthy man and woman. We do not know the exact conditions under which promiscuity produces these diseases. Dirt and excess of all kinds favor their production; but we also know that, however apparently healthy the individuals may be who give themselves up to indiscriminate debauch, yet these diseases will speedily arise amongst them. Now, I wish to point out with emphasis (to you who are engaged with the criminal classes) this chief originating cause of disease, viz.: promiscuity. * * *

Ask yourself whether any particular legislative act tends to check licentiousness in both men and women; if not, it is either useless or injurious to the nation because it does not check that source of constantly increasing danger, viz.: promiscuity. The effect of brothels and contagious diseases acts, of establishments and laws which do not tend to check promiscuous intercourse, is to facilitate, not stop, such vice, and cannot eradicate the diseases of vice which spring from such intercourse. The futility of any system which leaves the causes of disease unchecked, and only tries to palliate its effects, is evident. The futility of such a false method would remain, even if it compelled the inspection of vicious men as well as women. But when a system attempts only to establish an examination of women, leaving men uninspected, and allowing free scope to the licentiousness of all, it becomes a direct encourage-

ment to vice. It tends to facilitate that brutal custom of promiscuous intercourse without affection and without responsibilities, which is the disgrace of humanity—the direct source of physical disease as well as of measureless moral evil.

But I do not advocate letting disease and vice alone. There is a right way as well as a wrong way of dealing with venereal disease. I consider that legislation is needed on this subject. * * *

A law which makes it a legal offence for an individual suffering from venereal disease to hold sexual intercourse with another person, and a ground for separation, is positively required in order to establish a true principle of legislation, a principle of just equality and responsibility which will educate the moral sense of the rising generation and protect the innocent. Any temporary inconveniences which might arise before the wisest methods of administering the law had been established by experience, would be as nothing compared with the elevating national influence of substituting a right method of dealing with the diseases of vice for the present unjust and evil method. The first direct means, therefore, for checking venereal disease is to make the spreading of this disease a legal offence.

Secondly, a necessary regulation to be established in combating the spread of this disease is its free treatment in all general dispensaries and hospitals supported by public or charitable funds. Such institutions have hitherto refused to receive persons suffering from disgraceful diseases, or have made quite insufficient provision for them. This refusal or neglect has left venereal diseases more uncared for than ordinary diseases. * * *

Whilst thus advocating the careful framing of a law to make communication of venereal diseases by man or woman a recognized legal offence, and whilst insisting upon the claims of this form of physical suffering to free treatment in all general medical charities, I would most earnestly caution you against the dangerous sophism of attempting to treat women as prostitutes. Never do so. Never fit women for a wicked and dangerous trade, a trade which is utterly demoralizing to both men and women, and an insult to every class of women. The time is coming when Christian men and women will see clearly that this hideous traffic in female bodies, this frightful danger of promiscuous intercourse, must be stopped. * * *

To return, in closing, to the article under review: The author would undoubtedly explain his omission to consider the moral aspects of the relation of municipalities to vice by saying that he was looking only at the possibilities of legal control, and it is evidently his belief that statute law should follow rather than precede moral movements, or rather, that he goes even so far as to believe that law should not prohibit or punish anything which the majority approve, no matter how wrong the majority may be. There is, of course, a certain amount of reason in this position. It is true that men cannot be made virtuous by law. It is equally true, however, that men can be greatly helped by law to act virtuously. It is also true that men can be made vicious by law, and in the present connection this last truth is of immense importance, for in all movements to settle the relation of municipalities to vice the danger is not that an attempt will be made to impose too high a standard of

conduct upon the people, but that laws will be passed which accept a very low standard, laws which would be directly applicable only to a very small part of the people, but which would have a disastrous influence upon the morals of all.

It is as if one had charge of a growing child with a deformed leg which needs support. The question is what kind of a support shall be used? It would, of course, be impossible to make a frame suitable for a normal limb, but it would be cruel folly to clamp the deformed leg into a frame exactly fitted to its actual size and condition, for that would serve only to distort it still more, and would eventually end in the death of the child. Three objects must be considered in planning the frame: the support immediately needed, room for the leg to grow, and help to force it to grow straight. The support must be changed constantly, and must always have reference to the distorted condition of the limb, but it must always be constructed with a view to future improvement, and above all, the ideal of the normal, healthy limb must ever be present to the mind of the surgeon who plans the appliance.

It is exactly so in the case of human laws. They must not be too far removed from the actual state of moral development of the people, but they must always look towards improvement, and they must never be opposed to the higher law.

Law has a tremendous power of education, especially upon the young, and to condemn the race to the loss of the influence of laws nobler than the current morality would be to surrender one of the instruments that have been most potent since history began in lifting men to higher planes of thought and conduct.

No doubt morality and religion are the only "sure foundation" for noble conduct, but morality and religion embodied in law have always had a tremendous influence in moulding the character of nations.

The great law-givers of the race have never dwarfed their standards to those of the majority. Moses, Solon, Numa, Alfred and the countless others who have helped the race onward by means of noble laws, have not followed in the rear, but have led far in advance, embodying in statutes for the careless and immoral throng the highest morality they have themselves received from God.

FRANCHISE TAXATION IN ILLINOIS.

BY HIRAM B. LOOMIS.

The word franchise has a much broader meaning than people ordinarily give it. Speak to a man of franchises and he straightway thinks of the special privileges our street railway, gas, telephone and electric lighting companies have obtained from city councils to use the public highways. In its legal sense, however, articles of incorporation constitute a franchise. A corporation for baking bread, making shoes, or selling groceries has a franchise in this sense of the term just as truly as a railroad or telephone company. The Illinois franchise tax is really a corporation tax; but this article will be confined to a discussion of the taxation of companies which have franchises in the popular as well as in the strictly legal sense of the term.

Legislation.

Under the laws of Illinois any body of persons, by making the proper application and paying the fixed fees, may incorporate as the — railroad or gas or telephone company. They may then do business in their corporate name, may sue and be sued as a corporation; their company is a person before the law. They have now a franchise in the legal sense of the term; but they are not yet able to run street cars or to furnish gas or telephone service. Before they may do these things they must go before the legislative body of some state or municipality and get the privilege of using a narrow and continuous strip of land on which to lay their rails or pipes or string their wires.

For the taxation of such corporations the Illinois state constitution has the following special provision (Art. 9, Sec. 1):

"But the General Assembly shall have power to tax and persons or corporations owning or using franchises or privileges, in such manner as it shall, from time to time, direct by general law, uniform as to the class upon which it operates."

To put into effect the various constitutional provisions on taxation the state legislature, on March 30, 1872, passed a general revenue act, which contained the following provisions bearing especially on our subject (Section 3, Clause 4):

"The capital stock of all companies and associations, now or hereafter created under the laws of this state, shall be so valued by the State Board of Equalization as to ascertain and determine, respectively the fair cash value of such capital stock including the franchise, over and above the assessed value of the tangible property of such company or association. Said board shall adopt such rules and principles for ascertaining the fair cash value of such capital stock as to it may seem equitable and just; and such rules and principles, when so adopted, if not inconsistent with this act, shall be as binding and of the same effect as if contained in this act, subject, however, to such change, alteration, or amendment as may be found, from time to time, to be necessary by the board: Provided, that, in all cases where the tangible property or capital stock of any company or association is assessed under this act, the shares of capital stock of any such company or association shall not be assessed or taxed in this state. This clause shall not apply to the capital stock or shares of capital stock of banks organized under the general banking law of this state."

Section 32.—"Companies and associations incorporated under the laws of this state (other than banks organized under the general banking laws of this state) shall, in addition to the other property required by this act to be listed, make out and deliver to the assessor a sworn statement of the amount of its capital stock, setting forth, particularly—

First—The name and location of the company or association.

Second—The amount of capital stock authorized, and the number of shares into which such capital stock is divided.

Third—The amount of capital stock paid up.

Fourth—The market value, or, if no market value, then the actual value of the shares of stock.

Fifth—The total amount of all indebtedness, except the indebtedness for current expenses, excluding from such expenses the amount paid for the purchase or improvement of property.

Sixth—The assessed valuation of all its tangible property."

The only point calling for explanation in this schedule is the fifth item. Translated into colloquial English this would read, the total amount of the bonds or bonded indebtedness.

As there is a widespread feeling that the taxation of indebtedness is a peculiar proceeding, a word of explanation of this particular case may not be out of place. The bonds of a railroad or other corporation are of the nature of a mortgage on its property. Suppose a man has a house and lot whose market value is \$5,000. If it is mortgaged for \$2,000, he will get only \$3,000 for his equity at a fair sale; but the value of the house and lot equals the mortgage plus the equity. In like manner, if a person should buy up

all the stock of a railroad, he would have bought only the company's equity; the bondholders would still have their mortgage upon the property. In order to become absolute owner he would have to buy up all the bonds as well as all the stock. As the end to be attained is to find the value of the franchise by subtracting the value of the tangible property from the total value of the property, we should evidently take for the total value the value of all the stock plus the value of all the bonds.

Sections 40 to 52 of the law relate especially to railroads. The plan for taxing railroads is as follows. There are three separate valuations:

First. A valuation of such real estate and personal property as is distinctly local by the local assessor.

Second. A valuation of the track and right of way, including depots, buildings and other improvements on it, and of all rolling stock and other personal property which is not local by the state board of equalization. These two constitute the tangible property of the company.

Third. A valuation of the "capital stock, including the franchise, over and above the assessed value of the tangible property" by the state board of equalization.

Attitude of the Courts.

In reference to the assessments made by the board of equalization the Supreme court of Illinois has held (*The Pacific Hotel Company vs. Herman Lieb et al.*, 83 Ill. 606):

"The State Board of Equalization, in assessing this class of property, does not act as a board of review, as it does with respect to other kinds of property, but as an original assessor."

And again:

"In our opinion, neither the neglect of the local assessor nor that of the corporation, nor both, can excuse the Board of Equalization from its duty to value the capital stock of all companies and associations created under the laws of the state, provided it can otherwise get satisfactory information for that purpose; and of this, from the nature of its organization, it must necessarily be the judge."

In 1873, in accordance with the powers granted it by the statute, the board of equalization made the following "rules and principles for ascertaining the fair cash value of the capital stock:—"

"Resolved, That for the purpose of ascertaining the fair cash value of the capital stock, including franchises, of all companies and associations now or

hereafter created under the laws of this state, and for the assessment of the same or so much thereof as may be found to be in excess of the assessed or equalized value of the tangible property of such companies and associations respectively, we, the State Board of Equalization, hereby adopt the following rules and principles, viz:

"1st. The market or fair cash value of the shares of capital stock and the market or fair cash value of the debt, excluding from such debt indebtedness for current expenses, shall be combined or added together, and the aggregate amount so ascertained shall be taken and held to be the fair cash value of the capital stock including the franchises respectively of such companies and associations.

"2d. From the aggregate amount ascertained as aforesaid there shall be deducted the aggregate amount of the equalized or assessed valuation of all the tangible property respectively of such companies and associations, such equalized or assessed valuation being taken in each case, as the same may be determined by the equalization or assessment of the property by this board, and the amount remaining in each case, if any, shall be taken and held to be the amount and fair cash value of the capital stock, including the franchise, which this board is required by law to assess respectively against the companies now or hereafter created under the laws of this state."

This method of ascertaining the total value of the capital stock, including the franchise, has been sustained by the supreme courts of the State of Illinois and of the United States. In the case of *Porter et al. vs. R. R. I. and St. L. R. R. Co.* (76 Ill. 592), the Supreme court of Illinois said:

"Nor are we able to see any reason why the aggregate market value of all the shares of a corporation, representing as it does the estimate put, not merely on the property of the corporation, but also on the rights, privileges, capacities and present and prospective results of the corporate organization and business—in other words, on its franchise—is not a legitimate and just method of arriving at a basis on which to calculate an excise or tax. Inasmuch as the market value of the shares is generally a sure indication of the value of all that appertains or belongs to the corporation, corporeal and incorporeal, the aggregate market value of all the shares of stock affords a reasonable and equitable mode of measuring the value of the franchise. It certainly furnishes a more accurate standard than the capital of a corporation actually paid in or than the amount of corporate business transacted during a specific period. A tax graduated on the amount of capital paid in may operate unequally and inequitably, because the capital may be impaired by losses or greatly increased by profits. The amount of business done in a given period may not always furnish a true standard of the value of corporate privileges, because it may sometimes be carried on disadvantageously and without gain, and at other times with great success and profit. But the market value of the shares, taken in the aggregate, at the time of assessing the tax would be likely to show, with approximate accuracy, the actual existing value of the rights, privileges and benefits conferred by the franchise."

In the *State Railroad Tax cases* (92 U. S. 601), the Supreme court of the United States said:

"The statute of Illinois and the rule adopted by the Board of Equalization may not be the wisest mode of doing complete justice in this difficult matter; but we confess we have, on the whole, seen no scheme which is better adapted to effect the purpose, so far as railroad corporations are concerned, of taxing at once all the property, and of making the tax just and equal in its relation to other taxable property of the state."

And later, speaking of the assessment of the bonds:

"These mortgages are, however, liens on the road, and, taking precedence of the shares of the stockholders, may or may not extinguish the value of his shares. They must in any event affect that value to the exact amount of the aggregate debts, for all that goes to pay that debt and its interest diminishes pro tanto the dividends of the shareholder and the value of his shares."

"It is therefore obvious that, when you have ascertained the current cash value of the whole funded debt, and the current cash value of the entire number of shares, you have, by the action of those who above all others can best estimate it, ascertained the true value of the road, all its property, its capital stock and its franchises; for these are all represented by the value of its bonded debt and of the shares of its capital stock."

Statutes Nullified.

The state law is clear; the first rules of the board of equalization, which were not changed until the present year,* were explicit; and the courts, both state and national, have sustained the law and the rules. It would seem that the advocates of the franchise tax could ask nothing more in the way of legislation.

For twenty-eight years it has been put to the test of experience.

*Following is the text of the new rule adopted November 22, 1900:

"Resolved, That for the purpose of ascertaining the fair cash value of the capital stock, including the franchise, of all companies and associations now or hereafter created under the laws of the state, and for the assessment of the same, or so much thereof as may be found to be in excess of the assessed or equalized value of the tangible property of such companies and associations respectively, we, the state board of equalization, hereby adopt the following rules and principles, viz.:

"1. The capital stock of each said company or association shall be valued as an entity, due consideration being given to the following propositions: (a) To the character and duration of the franchise of said company or association. (b) To the amount of the contribution, if any, demanded of and paid by said company or association under the provisions of any contract or ordinance to any municipality as compensation for the use of its franchise privileges in said municipality. (c) The highest and lowest quotation of the shares of stock of said company or association during the twelve months immediately preceding the date of assessment and the number of shares of stock sold at such quotation. (d) Any other fact or condition of circumstance that will assist in arriving at a just and equitable fair cash value of said capital stock.

"2. From the aggregate amount ascertained as aforesaid there shall be deducted the aggregate amount of the equalized or assessed valuation of all the tangible property, respectively, of such companies and associations, wherever the same may be located (such equalized or assessed valuation of its Illinois property being known in each case, as the same may be determined by the equalization or assessment of property by this board), and the amount remaining in each case, if any, shall be taken and held to be the amount and fair cash value of capital stock, including the franchise, which this board is required by law to assess respectively against companies and associations now or hereafter created under the laws of the state.

"3. The above and foregoing are declared to be the only existing rules and principles adopted by this board for its government in the assessment of capital stock of companies or associations."

The exact interpretation of this rule, if it admits of exact interpretation, is left to the ingenuity of the reader.

How has it worked? The story is short: Franchises have entirely escaped taxation. The following table tells it so far as railroads are concerned:

ASSESSMENT OF RAILROADS.

Year.	Local.	Track, etc.	Capital stock.	Total.
1869.....	.....	.....	.....	\$16,280,960
1871.....	.....	.....	.....	25,516,042
Law goes into effect.				
1873.....	\$9,568,043	\$59,317,409	\$64,611,070	133,496,522
1874.....	6,863,707	43,529,716	31,314,175	81,707,598
1875.....	5,673,477	32,163,644	22,649,222	60,486,343
1876.....	5,403,399	28,819,832	10,106,258	44,329,489
1877.....	4,496,063	37,141,180	.....	41,637,243
1878.....	4,051,349	36,410,516	.....	40,461,865

In 1877 the committee of the board of equalization on the assessment of railroads reported as follows (Proceedings of the State Board of Equalization 1877, page 73):

"Your committee finds that a fair and equitable assessment of the 'tangible property' of the foregoing railroads leaves nothing to be assessed as 'capital stock.'"

After some debate this report was adopted, and since then no railroad franchises have been assessed in Illinois.

Franchises not Assessed.

In other cases, the board of equalization goes through the form of assessing capital stock. This is a genuine assessment for many small business corporations; but franchise holding corporations usually escape, the larger companies almost invariably. The table upon page 394, taken in part from evidence presented by the Chicago Teachers' Federation in their suit against the board of equalization—and in part from the proceedings of the board of equalization—gives details for the largest of the Chicago street railroad, gas, electric light and telephone companies.

It is to be noted of course that real property is not assessed at its full value in Chicago, and if either as tangible property or under the franchise tax law, the franchise companies were taxed in the same *proportion* as private individuals or other companies owning real estate, no marked injustice would be done. But such is, far from the case. The assessed value of *real estate* is upon an average

TABLE No. 1.

	NAME OF COMPANY				
	Chicago City Railway Company	West Chicago Street Railroad Company	North Chicago Street Railroad Company	People's Gas, Light and Coke Company	Chicago Telephone Company
Amount of capital stock paid up.....	\$13,000,000	13,189,000	7,920,000	28,668,800	5,971,100
Its market value April 1, 1900.....	(@ \$260	(@ \$111	(@ \$224	(@ \$106.50	(@ \$150
Amount of bonds, par value.....	\$33,800,000	14,639,790	17,740,800	30,532,272	8,956,650
Total market value bonds and stock, April 1, 1900..	\$4,619,000	12,201,000	4,744,000	34,406,000	4,808,000
Assessed valuation of tangible property, 1899.....	\$38,419,500	27,428,770	22,660,160	67,398,272	14,005,050
Net assessment of capital stock, 1899.....	\$1,730,899	1,553,746	975,613	3,040,798	751,797
Market value of bonds and stock for 1899.....	0	0	0	0	0
Percentage of assessed to market value.....	\$38,000,000* 4½	24,800,000* 6¼	24,800,000* 4	65,420,000† 4½	13,267,000‡ 5½

* Computed from lowest quotation of the year.

† From annual statement of company, Chicago Sunday papers, February 10, 1900.

‡ From mean quotation for March and April, 1899.

§ From statement of company, Chicago Sunday Tribune, April 29, 1899.

11 or 12 per cent. of its true value,* but the principal franchise corporations given above pay, in the aggregate, slightly over 5 per cent. In other words, the property owner is taxed twice as heavily as the franchise corporation. The small shopkeeper and the office clerk, who are struggling to carry on an independent business or to own their own little home, are weighed down with the heavy taxes which the corporations made wealthy at the expense of the public ought to share.

The Ninth Biennial Report of the Bureau of Labor Statistics of Illinois contains the following interesting data:

TAXES, LICENSES AND SPECIAL PAYMENTS FOR 1896.

CHICAGO CITY RAILWAY COMPANY.

Assessment	\$1,300,000
Percentage assessment to true value.....	4.54 per cent.
Market value of stock, bonds and other obligations.....	28,619,500
Taxes	\$109,382.00
Licenses	22,024.75
Electric light maintenance.....	10,000.00
Other payments (special, not annual).....	101,678.84
Total.....	\$243,085.59
Percentage of total to gross earnings.....	5.05 per cent.
Percentage total taxes to true value.....	0.85 per cent.
Taxes that would be paid if assessment were 9.25 per cent. of true value and tax rate same as now.....	\$267,293.01
Excess of such tax over all present payments and taxes.....	24,207.42

WEST CHICAGO STREET RAILWAY.

Assessment	\$1,100,000
Percentage assessment to true value.....	3 per cent.
Market value of stock, bonds and other obligations.....	36,679,100
Taxes	\$100,034.00
Licenses	16,726.87
Other payments (special, not annual).....	53,000.00
Total.....	\$169,760.87
Percentage of total to gross receipts.....	3 per cent.
Percentage total taxes to true value.....	0.46 per cent.
Taxes that would be paid if assessment were 9.25 per cent. of true value and if tax rate were same as now.....	\$366,916.71
Excess of tax over all present payments and taxes.....	197,155.84

*Based on estimates of persons well qualified to judge and on report of the commission appointed by Mayor Swift in 1896. This commission, composed of three well-known real estate experts and two practical builders, reported that in district considered (the portion bounded by the river, the lake and 12th street)*the assessed value of real estate was 9.25 per cent. of the true value. The Board of Equalization added 20 per cent. to the assessment, making the percentage 11.1.

MUNICIPAL AFFAIRS.

NORTH CHICAGO STREET RAILWAY.

Assessment	\$500,000
Percentage assessment to true value.....	2.03 per cent.
Market value of stocks, bonds and other obligations.....	24,610,400
Taxes	\$44,870.00
Licenses	15,739.86
Electric light maintenance.....	15,000.00
Other payments (special, not annual).....	39,000.00
Total.....	\$114,609.86
Percentage of total to gross receipts.....	2.03 per cent.
Percentage total taxes to true value.....	0.47 per cent.
Taxes that would be paid if assessment were 9.25 per cent. of true value and if tax rate were same as now.....	\$242,939.10
Excess of such tax over all actual taxes and other payments.....	128,329.24

Probable Effect of Enforcement.

But the above tables are altogether too favorable to the railroad companies in their implication, for the payment of special car licenses ought not be set off against the taxes they should pay. They ought to pay taxes in addition to these special payments just as any person or corporation does. This means that, on the basis of the market values of their capital stock given in the tables, their taxes should have been increased by the following amounts: Chicago City Railway Co., \$157,911.01; West Chicago Street Railway Co., \$266,882.71; North Chicago Street Railway Co., \$198,069.10. But an increase in their taxes would diminish their dividends and consequently the market value of their stock. Allowing for this on the basis that 5 per cent. is the proper return for this kind of investment, or, what is the same thing, that a 5 cent increase in taxes would diminish the market value of the capital stock \$1, we would have approximately the following condition:

	Market value of stocks and bonds.	Increase in taxes to place them on a par value with real estate in center of Chicago.
Chicago City Railway Company.....	25,987,000	131,600
West Chicago Street Railway Company....	32,234,000	222,400
North Chicago Street Railway Company...	21,309,000	165,000
Totals	79,530,000	519,000

The equalized assessment of these three companies, at the rate of 11.1 per cent. of the real value, should have been \$8,824,000,

instead of \$2,900,000. They escaped, then, an assessment of \$5,924,000. As the total assessment in Cook county for 1896 was \$272,940,874, this would have meant a decrease of about 2 1-6 cents on the dollar for all other taxpayers in Cook county, if the same amount of money had been raised and if these three companies had been taxed at the same rate as real estate was in that year, in the central part of the city.

It is to be especially noticed that in this comparison it has not been proposed to assess these street railroad companies as the poor man, who owns a little cottage or store is assessed, but as the owners of sky scrapers and of land worth millions of dollars per acre are assessed. Suppose the rate of assessment were 15.9 per cent of the real value, which the Bureau of Labor Statistics (Eighth Biennial Report, p. 80), found to be true in 1893 for residences which sold for less than \$4,000. If this rate were applied to these three companies alone, after making due allowance for the consequent decrease in the value of their stock, the same amount of money would be raised, if every other taxpayer in the county were given a discount of 3 1-3 per cent. What would be the decrease if the same rate were applied to other franchise holding corporations?

- Financial Needs of Chicago.

An incident that occurred at a meeting of the board of equalization last fall shows how completely this law has failed of execution. Owing to insufficiency of funds, the school year in the Chicago public schools has been twice shortened, with a corresponding diminution in salaries. In looking for a remedy the teachers found that the street railroad and gas companies were practically escaping taxation. They then set out to secure the assessment of the capital stock of such corporations, including their franchises. The teachers' representatives appeared before the board of equalization and asked for the enforcement of the law in accordance with the rules of the board. A representative of the corporations referred to this as an attempt to compel the board to enforce some old rules which he felt sure not more than two or three members knew anything about.* A member spoke out

*After securing nothing from the board of equalization but a small increase in the assessment of franchise holding corporations, the teachers brought suit for a writ of *mandamus*, ordering the board to make the assessment. The writ was finally granted by the Circuit Court of Sangamon county. The matter will doubtless come before the Supreme Court for final decision.

and said that none of them knew these rules were in existence before the teachers had asked for their enforcement. How many franchises had they been assessing in accordance with these rules?

Here is a condition for the advocates of franchise taxation to face and a problem for them to solve. For over a quarter of a century Illinois has had a good franchise-tax law; everything has looked well on paper; but franchises have escaped taxation. Why has the law failed?

Why and Wherefore.

It looks as though the franchise interests had soon gained control of the board of equalization. Traction interests especially are expert in dealing with boards and commissions. In this case it is neither difficult nor expensive. Not one man in a hundred knows who is on the board of equalization from his congressional district; not many more than that know that there is such a board or when and how its members are chosen. But those who look after the interests of the franchise holding corporations are better informed; and no one is nominated by either of the principal political parties who is not *persona grata* to them.

It might seem at first blush that the failure to enforce the law was due to the fact that the assessment was made by a central body instead of by the local assessors; but this is not the reason. Practically the same thing would have happened had the assessment been made by local officials, for these same interests are fairly successful in escaping local assessment.

Let us face the real difficulty. By our laws practically all property should be assessed. It is possible, then, while raising a given sum by taxation, to lower the proper tax on one class of property by raising it on some other class. No intelligent man can doubt that some property is taxed too high and other property too low. But whose property is taxed too high, and whose too low? Directly or indirectly large interests may be trusted to "see" the assessing power, whether it be a state board or local officials. These interests will get a low assessment, and the taxes which they ought to pay, and which must be raised, will be taken from the pockets of the great mass of the common people. Moreover the poorer the man, provided only more can be got out of him than is

needed to meet the expense of collection, the greater will be his proportionate share of the burden.

We hardly recognize the force which impells franchise holding interests to escape taxation. The value of their stock depends on its dividend paying power. What is taken in taxes cannot be paid in dividends. If a return of 5 per cent. is expected from the investment, then every nickel taken from them in taxes decreases the selling value of their stock by \$1. An increase in their taxes of \$5,000 would decrease the market value of their stock \$100,000. If there were 100,000 shares this would diminish the value of each share \$1. But \$5,000 would be a small increase for some of them; a \$50,000 increase in their taxes would diminish the total value of their stock \$1,000,000, and the value of each of the 100,000 shares \$10. Is it any wonder the corporations leave no stone unturned to escape taxation?

Now look at the other side of the picture. The poor citizen, who pays the tax collector \$5 or \$10, hates to part with his money, it is true; but it would cost him more to make a fight about it and he knows he would not win. Perhaps he does not even see the collector and foolishly thinks that he pays no taxes at all, not realizing that he is paying more for his meat and groceries, more for his coat and shoes, more for his carpets and furniture, because every tax ever put upon any of these articles is ultimately paid by him, their consumer. These people don't even know they pay taxes. Can they be relied on to make a vigorous protest against paying more than their share while the franchise holders are paying less?

It makes but little difference what is the machinery of assessment, it makes but little difference what is the specific form of the law, it makes but little difference how heavy the penalties are for its evasion—witness the wholesale perjury in swearing to schedules of personal property—a class with a strong and direct pecuniary interest in escaping taxation will succeed in throwing the burden on a class which either thinks it is not taxed at all or utterly fails to realize the extent to which it is taxed. But there is a way to tax franchises, a way which is certain to succeed; repeal enough other taxes so that, if sufficient revenue is raised, the franchises must be taxed. When the sources of public revenue have been

made so few that only by assessing franchises can our good politicians raise enough money to pay their own salaries, franchises will be assessed. Even a poor method of assessment will work under those circumstances. As the elimination of evil is a prime requisite for the establishment of the good, so is the repeal of unjust taxation, and its forms are legion, absolutely indispensable to the effective enactment of a just system of taxation. All that is bad in the old must be destroyed before we can reap the benefits of the new.

VALUATION OF CITY REAL ESTATE FOR TAXATION.

By W. A. SOMERS.

The levy of taxes upon real estate being made in proportion to the assessed value, it is evident that if the assessed valuation gives to each piece of property the same relative proportion of the true value, it will result in an equitable distribution of the burden. The general knowledge of this fact, and the mistaken belief that the assessment is arrived at by taking a percentage of the *true* value of each piece of property, has condoned the practice of using less than the full value in making assessments.

The valuation of real estate for the purpose of taxation is made usually by individual assessors in small districts, each one being entirely independent of all others, and the assessment so made constitutes the basis for all general tax levies. The original assessment district, being the lowest political organization, say a township, first bears the necessary expenses of the town organization, then, being combined with other townships, villages and cities of the county, becomes the basis for the levy of county taxes. The combination of the counties forms the total assessment for the state, and on this the state taxes are levied.

The assessment frequently changes from year to year with the different ideas of the successive assessors, but always falling further below the full value. The departure from the full value probably has its origin in an effort to place valuations low enough to protect taxpayers from paying more than a just proportion of taxes levied by the higher political organizations. When the departure is once made from the full value, the tendency is constantly downward, for the reason that the district assessments being made independently of each other, the districts which are assessed at a higher ratio of the true value than the average will be forced in the next assess-

ment to a lower valuation in self protection. In cases of rapid changes in value—either advancing by reason of increase in population or business, or decreasing from any cause—the assessors will naturally try to protect the interests of their constituents by quickly recognizing any decrease in value, and by being correspondingly slow in recognizing an increase, and thus accelerate the downward tendency.

A further evil of the present system, and the one which is possibly much more important, is the inequality which often exists between properties in the same local assessment district. It is very difficult to ascertain market values where no change in ownership takes place, and, alas! not infrequently, other factors than ignorance are the cause.

In any attempt to compare valuations of tracts, the further the general assessment is below the true value, the greater will be the distortion brought about by any inaccuracy in determining the ratio between the true value and the assessment. The inequalities in the actual payment of taxes will be increased by any variation from an exact ratio of the true value between tracts just in proportion as the general valuation of the district is below the true value. Consequently, this continual lowering of the assessed value increases the inequalities and the difficulty of equalization.

When the inequalities become so great, and the injustice of the distribution of the burden so glaring that public opinion demands a complete readjustment, it is attempted sometimes by making the laws (which almost universally provide that the assessment be made at the true and full cash value), more stringent, by stating specifically that no lower value shall be used on account of the fact that the valuation is for the purpose of taxation; or, as has been done in a few cases, by providing that after the assessment is made at the full value, a percentage of such full value shall be used for the purpose of taxation.

Such attempted readjustment leaves the assessment subject to all the influences which tend to originate and continue the downward movement, and it is but a question of time when it will once more reach the point where public opinion will demand a readjustment.

Real Estate Values.

Before attempting to suggest methods which will insure greater accuracy and inspire in the mind of the taxpayer a confidence in the work, a brief consideration of real estate, its uses, and the principles underlying its value, is necessary.

Real estate, as usually defined for the purpose of taxation, is construed to include the land itself, whether laid out in town lots or otherwise, and all buildings, structures and improvements, trees or other fixtures thereon, and all rights and privileges thereto belonging; and all mines, minerals and quarries in and under the same.

Land is useful, first, for what it contains, or may be made to produce, as in the case of lands, which are useful on account of mineral, timber or agricultural resources. The value of this use may be designated productive value. Second, it is useful as a site upon which buildings may be erected, or upon which commercial enterprises may be carried on. The value of this use may be called site value.

The productive value of timber and mineral land will depend upon the quantity, quality and accessibility of the timber or minerals. The productive value of agricultural land will depend upon the character of the soil, climate and market. The effect of these conditions may be judged, and a reliable estimate of the productive value formed, from a knowledge of the facts.

Site value is that value which attaches to land on account of its usefulness for home or residence purposes, or on account of its favorable location for commercial uses. In both cases, the physical conditions must be considered, but in the case of land useful for residence purposes, the social surroundings will be the determining factor, and in the case of land useful for business purposes, its accessibility and proximity to centers of business activity will be the important element in determining its value. The weight given to these conditions in determining value is almost entirely a matter of opinion, and being entirely local, can only be intelligently judged by those who are familiar with the social conditions and surroundings, and with the opinions of the majority of the other members of the community.

The site value in the case of agricultural lands, especially in districts where farms are occupied by the owners as homes, may be

very great, and may differ greatly without regard to the productive power of the land. Many instances will come to mind of lands of equal productive power and reaching the same markets, in one case located near churches and schools and in a desirable neighborhood, and in the other case being in proximity to a brewery or soap factory, in an undesirable neighborhood, where the difference in value is great, owing entirely to the difference in site value caused by the different social or local conditions.

Productive value is the foundation for all value in lands, even when the site value reaches a point higher than the greatest productive power of the land, and the productive value becomes *nil* locally, as in the business districts of large cities. The climatic conditions may be such that the productive value of surrounding lands is great, yet the quality of the soil covering a business lot will not affect its value. Nevertheless, it is evident that this great site value only exists because of the concentrated productive value of large areas tributary to a common center.

That site value is fixed and determined by local opinion may be seen from the fact that the first settler in a wilderness has a distinct opinion of the value of his clearing and home, even though his nearest neighbor be ten miles away, and his opinion must be considered as the controlling element in a sale of the land. His opinion helps to mould, and is modified by, the opinions of the new settlers going into the district, and the local opinion grows in clearness with the increase in population. The unanimity of opinion will depend upon the social characteristics of the people. The more closely they meet upon common ground, the greater will be the uniformity in their ideas of the value of land. While this uniformity may be developed to a greater extent in one place than in another, still the opinion always exists, and may be found in every locality.

As this opinion is the basis of all purchases and sales, it is evident that it is the true measure of the value of the land, and is the measure which must be used in any successful effort to find the true and full cash value of each piece of property. This opinion may be designated, for convenience, Community Opinion. To define Community Opinion tersely, it is that opinion of value held in common by a majority of the members of a community.

Difficulties of Valuing City Lots.

While this may easily be applied to the assessment of property in rural communities, the lots in a city are so numerous, and of such widely varying shapes and dimensions, and the corner influence is such a disturbing element, that community opinion as to the value of specific tracts or lots cannot be formed. The tract of land constituting an ordinary farm in the rural district will in the city be divided and sub-divided into a thousand lots, and one of these lots situated in an important corner may be worth twice as much as a lot of the same dimensions adjoining, but which fronts on only one street.

The social conditions of a modern city are such that the citizen chooses his circle of friends from the entire city, aiming to secure those with kindred tastes rather than those whose only claim is their physical proximity. While the citizens composing such a circle of friends may own their own homes, the comparison of views will be more often as to the value of houses and other improvements than as to the land itself, and the opinion of each individual as to land values will be limited to very few tracts.

The changes consequent upon the growth of a city also are frequently so rapid that community opinion of values of specific tracts cannot be formed and assimilated. On account of this uncertainty, or lack of uniformity of opinion as to city values, the speculator sees an opportunity to buy from one for less than he can sell to another, which speculation magnifies the natural and justifiable changes, and in many cases results in apparent depreciation. This makes it impossible for anyone, except those who are directly in contact with the real estate business, and who make the conditions a constant study, to form any opinion whatever of the value of specific tracts.

Scheme Suggested : Street Values.

Notwithstanding the fact that community opinion does not exist in cities as to values of specific tracts, there does exist a community opinion which is just as definite and valuable for the purpose of taxation as though it extended to specific tracts, and which has elasticity enough to conform to growth, no matter how rapid, and to changes caused by shifting of business or residence districts. This is the opinion of the relative value of streets, and is community

opinion formed by those familiar with the streets. The question of their relative importance and value is a never failing theme of conversation between the citizens, and tends to bring about a uniformity of opinion, and makes it truly community opinion.

There always exists in cities a community opinion that a certain street is the best for business, and a consequent idea that land fronting thereon is the most valuable. From this most valuable street other streets of less value will be compared, a well defined opinion being present that the property on the less valuable street is valuable just in proportion as the street is less valuable, and the comparison will reach out from the central or best portion and embrace the entire city. The citizen, from having his circle of acquaintances scattered over the city, and from his constant use of the streets, will necessarily form an idea of their comparative value, and no matter what changes occur in the city on account of growth or changes in business or residence sections, the streets will register the changes to the citizen who daily frequents them as truly as the thermometer registers the changes in temperature.

To make use of this community opinion of the relative worth of the streets, it is necessary to find some common term that can be used to express their comparative value as a unit in all parts of the city. The value of one foot in width for some fixed depth is the best measure for this purpose, because of its common use and its applicability both to gauge comparative value of streets and real value of tracts. Starting with the value of such a unit on the best street and of the most valuable property, pushing out always along the lines of the most valuable, the work of recording these units will be easy of accomplishment.

By assuming in every case that the unit of one foot frontage is located in the center of a block, that is, half way between the cross streets forming the block, the most disturbing element, viz., the corner influence, will be entirely eliminated from the problem, and the judgment required in fixing the value of the units will be reduced to a simple comparison of street values.

Provided the value of the units has been fixed at the true and full cash value of the property, the most delicate shading of difference as to comparative value of streets may be accurately recorded in dollars, and any citizen can quickly and easily compare the work

and judge of its accuracy, both as to the relative value of the streets and the actual value of the property.

The work of fixing unit values can best be accomplished through a committee of citizens to determine the most valuable part of the city, and indicate by marking upon maps prepared for the purpose, the value of the units, or the value per front foot for a certain fixed depth in the middle of each side of each block, within the district selected. Then other maps should be prepared of districts surrounding and adjoining the central one, upon which should be marked the value of the marginal units fixed in the first or central district. New committees selected for these districts will have to guide them the values as fixed in the central district, and their work will be to extend these proportionate values over their respective districts.

On the completion of this second group of districts, all members of the various committees will come together with their maps, and the trifling inequalities and discrepancies occurring along adjoining lines may be quickly and satisfactorily corrected, and any errors or careless work that may have occurred in any district will be easily detected and corrected.

In large cities it may require several groups of districts to cover the whole city, in which case each group should be made complete and finished before an attempt is made to fix the value of units in the next larger group. As the work spreads from the center and reaches into the less valuable property, the districts may be made much larger without adding to the work of the committee, because of the greater uniformity in values.

All questions of inaccuracy of judgment must be tested by an examination of the unit values recorded on the map. Any taxpayer can thereby quickly learn the relative difference between the assessment of his property and any other property in the city, knowing that the values recorded indicate the value per foot front for the same fixed depth in all parts of the city. It is therefore necessary that this map, or copies of it, should be made records accessible to all citizens and taxpayers.

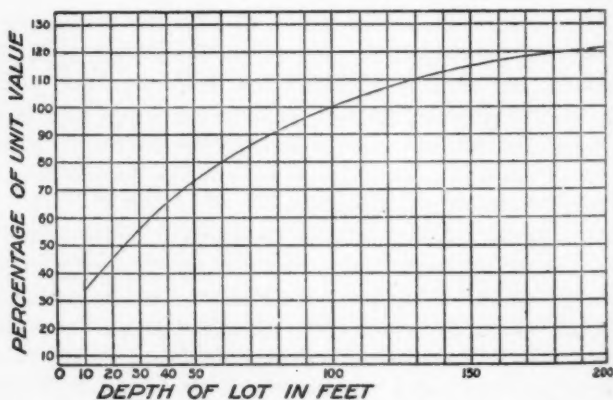
Lots of Varying Depth.

But lots vary in depth; they are not uniform in any city. Thus it is necessary to determine the ratio of the unit value to be used

for different depths. The different uses of the property will require the use of different ratios. For example, a very shallow lot in the retail district is worth a greater proportion of the unit value than a similar lot in the wholesale district. However, it will be found that three sets of ratios will cover all the different conditions—one for wholesale districts, one for retail areas and one for residential property.

The difference between properties used for different purposes, and the relative value of different depths, are practical questions which must be determined by the committees already formed. They should be called upon to fix the ratio for several different depths of lot in each class of property, as the foundation for the construction of scales, by the use of which the same relative proportions can be read for any depths between the points thus fixed. By the use of the scale to determine the frontage value, the value of any lot may be ascertained by a simple multiplication of the width of the lot by its frontage value.

The following represents a scale which has been prepared for lots in a retail district, assuming a unit depth of 100 feet:



A few illustrations will serve to show how it is to be operated. The point of intersection of the line indicating the depth of lot with the curved line shows on the horizontal lines the percentage of the unit value to be taken for that depth of lot. Based upon a unit value of \$1,000:

100 feet in depth reads 100%.....	\$1,000 a front foot
60 feet in depth reads 80%.....	800 a front foot
140 feet in depth reads 113%.....	1,130 a front foot

Corner Lots.

The subdivision of the blocks being made before the building of the city, in many cases the business growth has not followed the ideas of the original surveyors, and the best business streets may be what were originally laid out for cross streets. As a result, the corner influence must be considered to affect an equal frontage on each street forming the corner, and therefore becomes a square. In practice, it will be found most convenient to assume that it covers two lots. The corner lot is very largely affected by the value of the cross street, the lot next to the corner will be affected, but to a much smaller degree, while the third lot will not come within the corner influence.

Referring to Diagram No. 1, the squares affected by the corner influence correspond to the squares A, B, C and D. The frontage value of the unit is shown on this diagram on each side of the valuable than corner C because of the difference in the frontage values of the two streets forming these corners. It is equally clear that corner B is not worth as much as corner A, although they both have an equal frontage on the same street, which is valued at \$1,000 a foot, because the cross street bounding corner B is block. It is evident that corner A is more worth only \$500 a foot, while the other cross street is worth \$800 a foot.

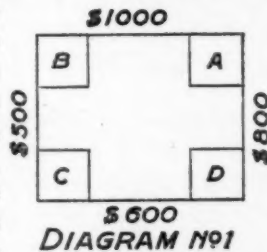


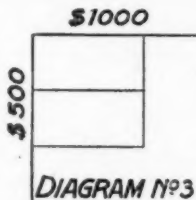
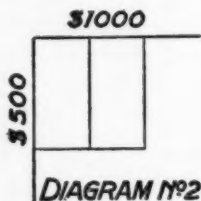
DIAGRAM NO. 1

To make the unit values the basis for determining the values of the corner it is necessary to get an expression of opinion from the committees of the value of a corner under several different conditions, or values of cross streets, as a foundation for the construction of scales by which this opinion may be applied to the determination of the value of any lot or subdivision of a lot coming within the corner influence.

Two or three sets of scales are necessary because of the different uses of the property. In a retail district the corner properties are

relatively more valuable because, where each passer is a possible customer, the facilities for attracting attention afforded by the double frontage are very valuable, while in a wholesale district this double frontage adds to its value only on account of additional light and accessibility.

As it seldom occurs that a corner square is held as one tract, and the most common subdivision of the corner is into two lots, which may be formed by a line running either parallel with, or at right angles to, the best street, scales must be constructed to show the value under both of these conditions. The necessity for this will be clearly understood by reference to Diagrams No. 2 and No. 3, which are intended to show the same corner square, No. 2 being divided by a line running at right angles with the more valuable street, while No. 3 is divided by a line running parallel with the more valuable street. In the case of the division as shown in No. 2, both lots have an equal frontage upon the better street, and while the corner lot is worth considerably more than the inside lot, the difference is not so great as in the case shown in Diagram No. 3, where the inside lot has no frontage on the better street, while the corner lot has its long frontage on the better street, making it a much more valuable lot than the inside one.



The construction of the scales must be made to meet the conditions. It is easily imaginable that in a very valuable section of a large city it would not only be desirable, but necessary, to arrange the scales to read to a much smaller division of the corners where the actual ownership is frequently smaller than the standard lot, and where the values are so great that inaccuracies liable to occur by attempting an adjustment of the values without the use of scales corresponding to the divisions, would cause serious inequalities in the assessment. The scales may be constructed to give the

value of any rectangular piece coming within the corner influence. A scale for testing the work is also used, by which the total value of a corner square may be read, so that any inaccuracies occasioned by irregular divisions will be detected.

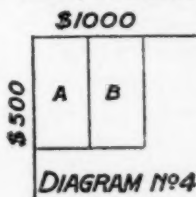
It will be remembered that in each case the committee is called upon to fix the value of lots under several different conditions, and from the values thus fixed the scales and rules are constructed and formulated by which the values of specific tracts throughout the city are determined. The fact must not be lost sight of that *these scales are merely the most convenient tools that can be used for this purpose, and are not arbitrary indicators of value.*

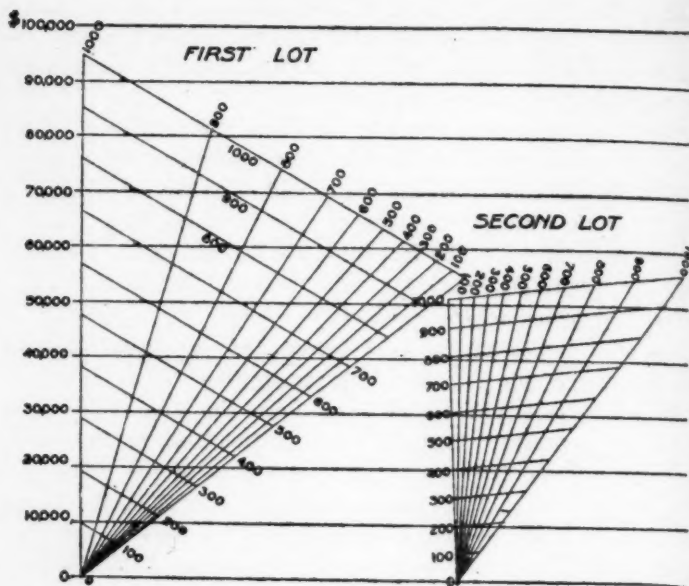
The unit values having been determined and marked upon the map upon each side of each block throughout the whole city, and the necessary rules and scales, based upon the community opinion of value as expressed through the committees, having been formulated and constructed, the actual assessment of the value of the land is completed. The balance of the work, that is, the determination of the value of each particular tract throughout the city, is purely clerical, and may be computed by anyone having a knowledge of the rules and understanding the use of the scales. A few illustrations will suffice.

The graph upon page 411 is a corner scale for finding value of two lots short frontage to better street, as shown on Diagram No. 4.

These scales should be constructed upon paper engraved with horizontal parallel lines to indicate the value in dollars, as marked on the margin of the scale. The larger triangle, marked "First Lot," is to give the value of the corner or more valuable lot marked A on the diagram, and the smaller triangle is to give the value of the inside or less valuable lot, marked B on the diagram.

The ten parallel lines marked from 100 to 1,000 at their lower ends, are used as indexes corresponding with the values of the better street from \$100 to \$1,000. The eleven lines radiating from the zero point at the bottom of the scale, and crossing the parallel lines referred to, correspond to the values of the less valuable street. The first, or zero line has no value, the second line corresponds to a street of one-tenth the

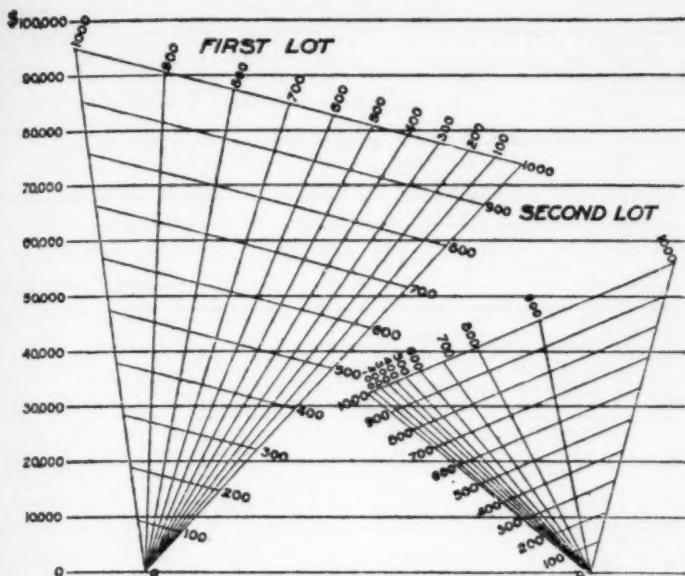




value of the better street, the third line corresponds to a street having two-tenths the value of the better street, and so on to the eleventh line, which corresponds to a case in which the streets are of equal value. The explanation applies to all the corner scales.

To find the value of Lot A, as shown on the above diagram, the unit values being fixed as marked, the best street being valued at \$1,000; on the scale marked "First Lot" find the parallel line corresponding to this figure (marked 1,000), follow this line upward to its intersection with the radiant line corresponding to the value of the cross street—500. This point of intersection falls between the \$60,000 and \$70,000 horizontal lines, and reads, if the scales were large enough to show the divisions, \$63,500. To find the value of Lot B, read in the same manner from scale marked "Second Lot," from which it will be found that the value is \$52,500, making the total value of the square \$116,000.

The following is another corner scale for finding value of two lots short frontage to street of less value, as shown on Diagram No. 5:



To find on these scales the value of Lots A and B follow the rules just given, which will give the value of Lot A as \$81,000, and the value of Lot B as \$35,000, making the total value of the square \$116,000.

A third corner scale, the graph for which is upon page 414, is for finding the value of corner square as a whole, as shown on Diagram No. 6.

The value of the corner square, with values indicated as shown on the accompanying diagram, is found in the same manner as in the preceding cases, by following up the 1,000 parallel line to its intersection with the 500 radiant line, which point indicates the value on the horizontal lines as \$116,000.

The value of the corner square being fixed by the unit values of the streets forming the corner, it is evident that the division or sub-

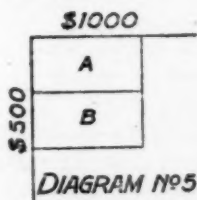


DIAGRAM No. 5

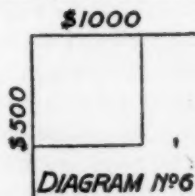
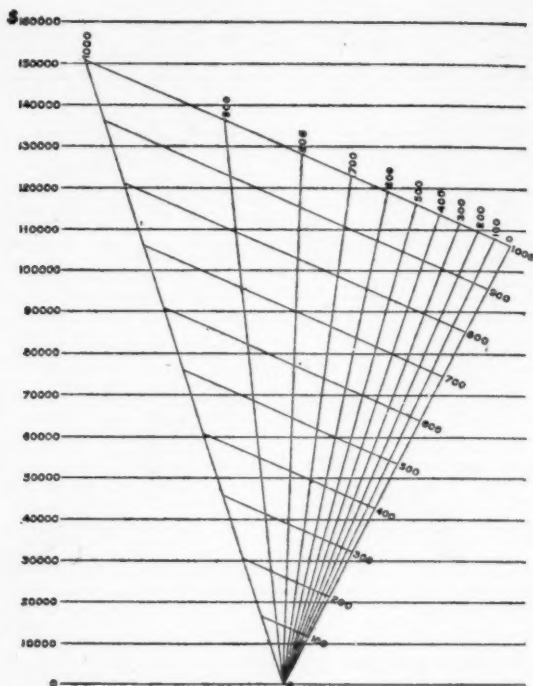


DIAGRAM No. 6



division of the square does not change its value. Therefore, the fact that the scales give the same total in each case demonstrates their accuracy.

The scales shown herewith are for illustrative purposes. Scales for practical use should be large enough to admit of marking the values of intermediate cross streets along each parallel line, by which the value of any corner bound by streets of units of \$1,000 or less, may be read.

An assessment to be successful must be satisfactory to a great majority of the members of the community. This can only be attained through their general knowledge of the work, and confidence in its justice and equity, and no matter how carefully and accurately the work may actually be carried out, unless the methods used inspire this confidence, the work will not be satisfactory. The method of dividing the work among a number of com-

mittees, consisting of citizens qualified to judge, and who have the confidence of the community, will result in giving the best possible expression of the comparative street values. The fact that the unit values are fixed and marked upon the map without regard to the size, shape or ownership of the lots, and the further fact that these figures are always accessible by the public, precludes the possibility of one property owner being favored at the expense of another, and must tend to create in the minds of all citizens a confidence in the justice and equity of the work.

The advantages of this system are evident. It largely removes the possibility of discrimination by reducing the basis of valuation to a uniform standard, there being no opportunity to lower the assessment of a single piece of property below the figure fixed by the scale. It is not necessary to value each lot, and thus a large amount of labor is saved, to say nothing of the temptations which visit the assessor under the present system. The principal task, upon which all else depends, is the fixing of relative street values, which, having been done, the remainder is simple mathematical computation. This not only simplifies the problem, but enables the property owner to ascertain easily whether the assessment is correct. The work is no longer done in secrecy, but upon the housetop and in a simple way.

Improvements.

The work of placing valuations on the buildings of a city is chiefly difficult on account of its magnitude. The cost of reproduction, rather than the original cost, is a determining factor of importance, and in respect to any one building may be easily obtained through the estimates of architects and contractors. Two other important factors enter into the determination of the value of city buildings—viz., probable period of usefulness and present utility. The judgment of the former must be largely based upon the facts brought out by a careful examination of the structure as to its physical condition and its fitness for the purpose it occupies. The value of the use of the structure, measured by the rents which may be received for its use, is the best guide to the value of its present utility.

In the valuation of city buildings for the purpose of taxation, however, the expense of employing experts, on account of

the great number and variety of structures, is prohibitive, and it is necessary to devise a method which will give the same good results at a comparative small expense.

A "building slip," containing questions which may be easily answered and arranged in such a manner that the answers may be quickly recorded, and which, when answered, will bring to the hand of the assessor the knowledge necessary to the formation of a reliable opinion of value, offers the best means for overcoming the difficulty of the great mass of the work.

From the records in the assessor's office at St. Paul, I take a slip as filled out by one of the examiners, which shows the following information in a very compact but easily understood form:

READING OF BUILDING SLIP.

Examined Apr. 20, 1896. Is a single house, No. 240 Laurel Ave., constructed of wood, upon a stone foundation, main floor being 4 ft. above general surface of ground. Front of the house 27 ft. wide; this width extends back 39 ft. Then it is 18 ft. wide, extending back 11 ft., all of which is two stories high. There is one one-story bay-window, and one two-story bay-window. Front porch is 9x26, a side porch 6x15, and rear porch 5x17. Roof is of shingles, built in form of a gable. Outside finish of siding with plain wood trimmings and there is a cellar under whole house, in which there are located a furnace, laundry room and rooms for vegetable storage. First story is divided into a hall, parlor, sitting-room, dining-room and kitchen. Second floor contains four bedrooms and bathroom. One room in the attic, unfinished. The inside finish of main part of lower story is plain pine finished in oil. Upper story the same. Heating system, hot water. Building is supplied with city water with faucets in yard, first and second floors, one bathroom, one closet, one sink and a faucet in barn. It is connected with city sewer system.

Building is in good repair and is occupied by owner, who estimates that it would rent for \$50 per month, and who states that the building was constructed in 1890.

The barn on the lot is constructed of wood, 36 ft. wide by 18 ft. deep, 1½ stories high, containing three stalls and one living room.

In front of the lot is a sidewalk made of cement with a granite curb in good condition. Surface of lot is level and about two feet above grade of street.

The slips used in St. Paul are so simple and the work of gathering this great mass of information is thereby reduced to such a system, that the cost is small and the work may be performed by men of no special training. A builder is the only expert necessary for the work, and the slips being of the same size, printed in the same manner and filled out according to the same rules, the builder, with a careful analysis of a few of them and accurate estimates of the buildings covered, can quickly arrange

the slips in classes or grades of structures. He can see at a glance whether a slip describes a building which it would cost \$5.00 or \$1.00 a square foot to reproduce, and it can be placed in the class to which it belongs. Through classifying the work in this manner, the duties of the builder are comparatively simple, and his work will be speedily performed. By this means the great magnitude of the work is overcome, and each improvement is assessed at its true and full cash value as determined by all the influences existing. The fundamental idea being, as above, to remove opportunity for discrimination by making certain fixed rules and by marking all property according to them.

The value of the improvements upon each tract or lot having been added to the value of the land, the assessment of the individual properties held and owned by the citizens is complete.

While the city may be divided into many assessment districts, for the purpose of combination with township and village assessments, it is and must be considered as one. After review by the city board of review, the rolls will be reported directly to the county auditor, where they should be combined with the village and township assessments, constituting the assessment of the county, to be passed upon by the county board of review.

The practicability of the methods in the foregoing is evidenced by the fact that the assessment of the city of St. Paul and Ramsey county, Minnesota, in 1896, was made in accordance with the foregoing principles and methods, under the direction of the writer, and proved satisfactory not only to the taxpayers, but to the state board of equalization as well.

In connection with the work 25,000 buildings were actually measured and their values estimated, and something over 150,000 different lots or tracts of land were examined and valued, covering in the city of St. Paul alone 55 square miles.

The committees of citizens called to assist in this work were composed of 38 prominent, well-known and substantial taxpayers. The committees were easily secured, and the members became deeply interested in the work, which they carried out thoroughly and completely by holding some twenty short sessions.

This assessment still stands, having been copied by subsequent assessors.

The success of the assessment and the satisfaction with which it was received by the citizens of St. Paul and Ramsey county, is well expressed by the following editorial in the *St. Paul Pioneer Press* of July 21, 1896:

"For the first time in its history St. Paul has had a satisfactory official appraisal of the values of real estate within its limits. * * * When the time came for reassessing the real estate of the city this year, as the result of conferences with representative citizens of all parties, the county assessor, Robert Seng, backed by an additional appropriation from the county, was ready with a plan of reassessment, submitted by Mr. W. A. Somers and carried out under his charge, which is nearly as scientific a scheme of assessing real estate as can well be devised."

RECENT STREET RAILWAY LEGISLATION IN PENNSYLVANIA AND PHILADELPHIA.

BY CLINTON ROGERS WOODRUFF.

Pennsylvania and Philadelphia have established new records for franchise legislation and regulation, which outdistance all previous records for flagrant and cynical disregard of public and private interests. Without question the recent action of the Pennsylvania Legislature and of Philadelphia councils constitutes one of the most conspicuous instances of infamous franchise looting in the municipal history of the United States. I use these words advisedly and cite the following facts and sequence of events to justify them.

On May 29, 1901, two street railway bills were introduced into the Senate of Pennsylvania—one by Senator Emery and one by Senator Focht. The former was in the form of a supplement to the Street Railway Act of 1889,¹ as amended by the act of 1895, and provided, among other things, that where a street railway company shall receive a charter to build a road on any street or highway no other charter shall be granted to any other company to occupy the same street or highway until after the time given to the first company to obtain the consent of the local authorities and to begin and complete its work shall have elapsed.

It further gives such corporations power “to *take*, hold, purchase, *operate*, *lease* and convey such real and personal property, estate and *franchises*, as the purpose of the corporation shall require.” (The *italicized* words represent the new powers given to such corporations.)

The corporations are also given the power to use such portion of tracks on all the streets, highways or bridges occupied by any other passenger railway company or companies incorporated under this or any general or special act and already laid down and in

constant daily use, and of all streets, highways and bridges included in the route of any other company or companies, but where the tracks are not laid down or which are not in constant daily use or which are only in temporary use. The length of tracks to be used on any other road already laid down shall in no event exceed 2,500 feet in length, in which measurement no bridges to be crossed or the approaches thereto shall be included, and the consent of the local authorities must be first secured. The compensation for such use of the tracks or streets is to be determined by five viewers appointed by the courts of common pleas.

The act also provides that all streets, highways and bridges, the use and occupation of which has been abandoned or which shall be deemed abandoned as hereafter set forth, or which are only in temporary use, or which are not occupied by any railroad because of the prohibition contained in any act of assembly or any ordinance of council, or because of any contract or agreement by and between any railway and the commonwealth or any railway and the local authorities of any city, may thereafter or hereafter with the consent of the local authorities, but not otherwise, be occupied and used by any railway company chartered under this act, or by the company which has abandoned or discontinued the use thereof.

The act further provides that applications to the local authorities must be made within two years and that the road must be completed and in use within five years thereafter. Corporations formed under the act are given the right and power to acquire property and lay tracks thereon.

The Focht Bill was entitled "An Act to Provide for the Incorporation and Government of Passenger Railways, either Elevated or Underground, or Partly Elevated and Partly Underground, with Surface Rights." After providing for the conditions to be complied with in the matter of incorporation and the other details incident thereto, Section 8 gives such companies the right of eminent domain and further the authority to use so much of the streets, highways and bridges of the commonwealth immediately adjacent to its tracks as may be necessary and proper either for the erection of stations or the proper, necessary and convenient approaches thereto, or both.

These bills were introduced without any previous public announcement. They came as a surprise alike to the public of the State and to the numerous existing street railway corporations. There had been no demand at this session for additional legislation on the subject, nor had there been any discussion of it. Early in the winter the late Albert L. Johnson, president of the Lehigh Valley Traction Company, had given public notice of his desire and intention to bring his lines into Philadelphia, and, in connection with this announcement, he published a list of about 180 miles of streets not now occupied with any street railway tracks, and upon which no rights to lay them were outstanding. Mr. Johnson, however, did not need additional legislation, and intended to appeal to councils for the needed permission at the proper time. It is generally thought that it was this publication of his plans that first suggested to the political machine the legislation herein described. There was a further reason for it to be found in the fact that some of the officers of the traction companies of Philadelphia and Pittsburgh had recently been more or less active in opposing Senator Quay's re-election to the United States Senate. Here, then, was an opportunity to secure franchises of great value and, at the same time, punish those who had the temerity to oppose the machine in the execution of its plans. In short, profit and revenge could be attained at the same stroke, and, once its plans were formed, the machine executed them with relentless vigor and with no regard to public decency or the rights of the public, or the interests involved.

Introduced at 3 p. m. on Monday, May 29, they were reported from committee within 5 minutes, and, by 8.50 p. m., the bills were printed and on the desks of the members of the Senate, and were passed by 9 p. m. on first reading. The Constitution provides that every bill must be read in place, presented to the chair, referred to a committee, reported therefrom, printed and read on three separate days. Here, then, we had the first five out of eight steps taken within six hours on one day.

The next day the bills passed second reading, notwithstanding that it was a legal holiday (Memorial Day), and, on the next day (Friday), they were passed finally, and were directed to be sent to the House for concurrence.

Although Friday is the day usually of small attendance, and is usually set aside for first reading, there was a full attendance of

the Senate, and the bill's reading secured the necessary twenty-six votes on final passage.

On the following Monday (June 3) the House, which usually meets on that day at 8 or 8.30 p. m., was called to meet at 4 p. m., shortly after which hour the two bills were received from the Senate and at once referred to the Committee on Corporations. Although the rules of the House forbid a committee from sitting while the House is in session, this rule was disregarded, and, without any chance whatever for any public hearing, the bills were brought back with a favorable recommendation. It was thought that the chairman of that committee would report them, and, as unanimous consent was necessary to receive the report at that time, the attention of the opposition was centered upon him. He made several attempts to get the Speaker's eye, but, in the meantime, an inconspicuous member of the committee, whose membership on it was but very little known, asked, in a low tone, for unanimous consent to report a bill. There was no objection, and, before the House knew what was going on, the Speaker announced that the bills had been reported out favorably. By this ruse the opposition was tricked and the rules of the House violated. Objection was at once raised, but to no effect, the Speaker being in the plot. The point was raised that the bills were improperly before the House, because of the committee having sat during a session of the House. With more force than grammar, he declared the point not well taken, "as the committee has sit." By 9 o'clock of that evening, the bills had passed first reading. On Tuesday, they were amended so as to prevent or make difficult the inauguration of three-cent fares, and passed second reading. They were then returned to the committee for needed changes in phraseology and re-reported next morning. On Wednesday, the bills passed finally.

On both second and third readings attempts were made to incorporate amendments protecting the interests of the State and cities, but to no avail. Among the amendments overwhelmingly defeated were those providing for four weeks' advertising of applications for franchises; for making the future bestowal of franchises subject to existing laws; to abolish the right to lease, sell or convey the franchises; forbidding the lease or conveyance of

franchises to parallel or competing lines; forbidding the issuance of stocks or bonds in excess of the actual cost of the road and its equipment; requiring that the roads be built or operated before the franchises could be sold; requiring elevated and underground railways to charge three-cent fares. Efforts to have the bills re-committed to afford a hearing for the interests involved were likewise defeated. In short, the bills were passed on schedule time by the committees and by the two houses, and no amendments or motions, except those favored by the machine (or "gang," as the papers have come to call those who have pooled their political interests for the spoilation of the State and cities), were passed or even given consideration, for, after a short debate, the previous question was called on every motion and amendment offered.

Three amendments of importance were added to the Focht bill. The first provided that any company incorporated under the act may make contracts to carry the United States mails; the second prohibits such companies from connecting their tracks with those of any railroad incorporated for the transportation of both passengers and freight from interchanging companies; the third expanded the section giving elevated and underground roads the right of eminent domain. The second amendment was inserted, according to well-informed authorities, to protect the steam railroads, at the instance of the Pennsylvania Railroad. The Emery bill was similarly amended, so that the companies chartered under the new bills are denied the privilege of carrying freight.

In six legislative days, two bills, radically changing the street railway law of the State and jeopardizing hundreds of millions of already invested capital and affecting untold millions of future franchises were passed without a single public hearing, and, in one house, without any debate, and, in the other, with only a travesty of one. I venture to declare that this is a record of rapid legislation in flagrant disregard and defiance of public sentiment and interests unequalled in the history of any other State in the country.

On July 7, at midnight, without a public hearing, and in the executive mansion, rather than in his public office, Governor Strong signed the bills in the presence of United States Senator Quay, his son, R. R. Quay, a Pittsburg millionaire and street railway manipulator; United States Senator Penrose, Congressman

H. Foerderer, of Philadelphia, who has since become the leading spokesman for the grantees of the new franchises; Clarence Wolf, Mayor Ashbridge's banker; Select Councilman J. P. McNichol, and Millionaire Contractor John M. Mack, all of Philadelphia; Henry W. and George T. Oliver, P. W. T. Mellen and E. M. Bigelow, Pittsburg capitalists and Quay supporters.

The Governor's action was officially published on the morning of July 8, and then the rush for charters began. The capitalists and politicians just mentioned were early on hand at the State Department, and, as the secretary of the commonwealth is a strong Quay machine man, he did not throw any obstacles in their way. Over one hundred applications for charters were filed between 7 and 10 a. m., of which thirteen were for Philadelphia companies. The formal incorporators were Robert H. Foerderer, John M. Mack, Michael Murphy, Clarence Wolf and Joseph Mack.*

The companies were capitalized for a total of \$7,198,000.

The charters were granted on Saturday, June 8. The same day a special meeting of the Select Council of Philadelphia was called for the following Monday at 3 o'clock, the earliest possible day. The Chamber met on that day and thirteen ordinances, granting the requisite privileges to the thirteen companies, were formally introduced and referred to the Street Railway Committee, which met at 1 o'clock Tuesday. There was a semblance of a hearing on this occasion, and Harry B. French, president of the Municipal League of Philadelphia, was graciously permitted to read the following statement of the League's position:

"First. That, although the recent acts of Assembly permit the lapse of a long period of time before any construction need be undertaken by any of these corporations, it is within the power of the City Councils to cut down this time and fix a shorter period within which the work of construction shall be begun and finished, and the interests of the people thereby more quickly served.

"Second. That it is within the power of Councils to couple, with the grant of the franchise, any condition that it thinks is for the benefit of the city and its inhabitants, such as a condition limiting the rate of fare, one providing for free transfers, one providing for the paving of the streets, one providing for adequate compensation for the grant of the franchise, and, most important of all, it is within the power of Councils to limit the term of the franchise and to provide that the tracks of the

*The titles of the thirteen companies are Passynuk Avenue Elevated, Broad Street Subway, Western Rapid Transit, Broad Street Rapid Transit, Chestnut Hill and Glenside Rapid Transit, Ridge Avenue Elevated, Frankford Elevated, Northern Rapid Transit, Germantown Avenue Elevated, Southern Rapid Transit, Eastern Rapid Transit, Central Rapid Transit and Market Street Elevated.

companies asking the franchise shall become public property at the expiration of the term for which the franchise is granted.

"Experience elsewhere as well as in this city has shown that franchises once granted have been but little subject to regulation, and that the interests of the city must be safeguarded at the time of grant, if at all."

The statement was heard by the committee in silence. Not a word was said about it by any member, and not a step taken, even, to consider the suggestions. The ordinances were all recommended for favorable consideration and were sent to Select Council, which passed them on first reading the same day. On July 12 the ordinances were passed finally by Select Council, and they were messaged to Common Council, which concurred in them all, sitting until 7 p. m. to accomplish this result—an hour beyond the time fixed for adjournment by the rules. The record of councils was more expeditious, for it passed thirteen long and intricate ordinances through all the stages of legislation in three days—a process made possible by their rules and the laws under which they are organized.

The next day, the 13th, the bills were transcribed and sent to Mayor Ashbridge for his consideration. Notwithstanding the statement of his private secretary that the ordinances would not be signed that day, they were, as a matter of fact, signed that evening, the Mayor returning from the ceremonies incident to the opening of the United States Mint, and remaining at his office until after midnight for the purpose. This action of the Mayor was undoubtedly due to the offer of John Wanamaker to pay the city \$2,500,000 for the franchises conferred by the ordinances, he having deposited \$250,000 with a trust company on account of the proposition. The letter conveying this proposition was handed to Mayor Ashbridge by Mr. Wanamaker's private secretary. The Mayor contemptuously flung aside the letter when he saw the envelope, without taking the trouble to examine its contents. He hastened back to his office, however, and did not leave it until all the ordinances had been officially approved.

To sum up, we have two highly-important bills touching a question of vital moment passed in six legislative days—the shortest possible time under our Constitution—and approved the next day at midnight without hearings of any kind. Then thirteen companies were incorporated under them in a single day. Then thir-

teen ordinances, granting valuable franchises, were passed in three days, and signed the fourth day by the Mayor at midnight, without hearing and in the face of a highly-advantageous offer from a responsible and well-known citizen, who had deposited a quarter of a million as an earnest of his good faith. I challenge any community in the United States to equal such a record of indifference to public sentiment, profligacy with the public assets, disregard of a public trust and the subjection of the law and lawmaking power for selfish private ends. If there is any city, large or small, which can show a similar record I want to learn of it, simply to relieve the feeling of degradation I now have.

Many scandals have attended the granting of franchises in Philadelphia, but we have never had anything that quite equaled this. I have heard of the "jamming" process in legislation, but I never saw it applied with more vigor than in the instance described in this article. The only concession of any kind made was the slight hearing granted to the Municipal League through its president, and his treatment was such as to reinforce rather than diminish the impression that the interest of the people were of remote consequence and consideration.

Shortly after the Focht and Emery bills were enacted, two supplemental bills were passed. The one to the Focht bill gave the corporations brought into existence by its provisions authority to build either an elevated or an underground road, or both an elevated and an underground railway, over the route described in their charter. The second provided that no street railway company shall hereafter be chartered until the necessity for such railways shall have been passed upon by a board consisting of the Governor, Attorney General and Secretary of the Commonwealth. In other words, having filched the State and the municipalities of all they could carry away at one time, they have left three of tried and trusted friends on guard to prevent any one else from carrying away any of the plunder yet unappropriated. The bills, popularly known as "chasers," were put through in the same time as the Focht and Emery bills, and, of course, received executive approval at the hands of Governor Stone.

BOSTON'S NEW SUBWAY.*

BY WILLARD WINSLOW.

To Boston belongs the honor of constructing the first municipal subway in the United States. Construction was begun in 1895 and the work was completed in 1898 at a total cost of \$4,350,000. Its object was to relieve the congestion of traffic upon the crooked, narrow and crowded streets in the central portion of the city, and to afford rapid communication between the business district and suburban areas upon the south and west.

To many the scheme was an experiment, especially to those who oppose the extension of municipal action. But its success was immediately demonstrated, not only from the point of view of rapid transit, but of finance as well. As a result, the construction of a second subway was proposed, to connect Scollay Square with the suburban districts upon the east.

The first bill to effect this result was drafted by and introduced into the legislature at the request of the Citizens' Association of Boston. It provided that the Boston Transit Commission (the authority which has charge of the present subway) should construct the proposed subway and pay for it by issuing city bonds. It also empowered the commission to lease the road to an operating company for a period of 20 years, the terms of the lease being subject to the approval of the State Board of Railroad Commissioners. This bill was not satisfactory to the Boston Elevated Railway—the proposed lessee—and after considerable negotiation with view to effecting an agreement, a new bill was drafted.

The principle difference between this and the former plan was that, while the Rapid Transit Commission was to construct the road,

*The writer wishes to express his indebtedness to Mr. Louis D. Brandeis for the use of valuable material regarding the proposed subway.

the Elevated Railway Company was to defray all expenses and use the subway until 1937 without paying the city anything for the privilege. The bill also extended the lease of the old subway from 1917 to 1937, making both agreements terminate at the same date. At the expiration of the lease, purchase by the city was provided for upon the condition that a majority of the voters of the city should so decide, and the payment to be made to the private company was the cost of the subway and structure less depreciation.

This proposition, which virtually handed over the subway to a private corporation for 40 years at the expiration of which period the city could only purchase it upon paying the market value, aroused great hostility and was condemned by many as a serious menace to the interests of the city. The Associated Board of Trade took the lead in opposing this measure, and as a result of the hearings before the legislature and the widespread opposition it encountered, no action was taken in the session of 1900.

Early in 1901 the Citizens' Association introduced a bill similar to the one it fathered in the previous session. The Associated Board of Trade presented a scheme similar to the statute under which the present subway is being operated, namely: municipal ownership and construction of the subway, the Boston Elevated Railway Company paying $4\frac{1}{2}$ per cent. of the net cost of the subway and its appurtenances for a lease terminating in 1917. In case the Boston Elevated Railway Company should not desire to lease the new subway, a similar agreement could be made with any other company.

Discussion of the various schemes continued. Numerous hearings were again held by legislative committees, and the longer the question was discussed the more evident it became that private ownership and control would be a grave mistake. Long after the hearings had been closed and while the committee on metropolitan affairs was considering the drafting of a measure, the Elevated Railway Company presented a new bill. The title and ownership of the subway was to be vested in the city of Boston, although the company was to furnish the funds to build it, not to exceed \$6,000,000, and to have exclusive use and control of it for fifty years from date of completion. In other respects it did not differ materially from the measure introduced by the Associated Board of Trade and certainly was not much more favorable to the city.

Although the opposition was strenuous, the committee having the matter in charge finally reported by a vote of 13 to 2 a bill calling for the construction of the subway by the Boston Transit Commission, the payment of not more than \$6,000,000 by the Elevated Railway Company and a lease to it of the subway for 40 years without payment of rent.

The committee's bill passed the House by a vote of 159 to 45 and the Senate by a vote of 25 to 11. When it came before Governor Crane for approval, he wrote a vigorous veto message, which had such a marked effect that over 60 members in the House changed their votes and the veto was sustained by a vote of 135 to 98.

The general interest in franchise questions and the excellent terse presentation by Governor Crane of the reasons why the bill should not become a law lead me to quote quite fully from his message:

This amounts to a lease of the proposed subway, when constructed, to the Boston Elevated Railway Company for a gross rental of \$6,000,000, paid in advance. If the cost of the subway does not exceed \$6,000,000, this rental, on the basis of 4% per cent., the rate of the lease of the existing subway, taking into consideration the advantageous investment of the sinking fund provided for by the bill, would enable the company to make itself whole in from thirty-two to thirty-five years, and would give to the Boston Elevated Railway Company the free and exclusive use of a great artery of public travel for from five to eight years without any compensation whatever. It is fair to assume that the sinking fund would be invested so as to bring about this result, but if not so invested the rental for the term would not exceed 4% per cent., the minimum rental of the Tremont Street subway; but the lease of the latter provides also for an increase of the rent proportioned to the amount of business done by the lessee. There is no such provision in the lease authorized by this bill. However much the volume of transportation may increase, the lessee, not the city, will receive the benefit. This provision, which is omitted in the present bill, making the amount of rent proportionate to the volume of business, is wise and equitable.

But there is no assurance that the subway can be constructed for \$6,000,000. If, as is very likely to be the case, the cost is in excess of that sum, not only is the rental of the subway proportionately decreased, but the excess must be paid by the city without reimbursement from any source. To the extent of such excess of cost the subway will be constructed at the expense of the city for the benefit of the proposed lessee. * * *

Previous legislatures have referred to the city of Boston, for its acceptance or rejection, acts relating to rapid transit. And the results of the ballots so taken show that the voters have acted intelligently, and with a full understanding of the issues involved. * * * I see no good reason why these precedents should not be followed in a bill so important and far-reaching in its consequences to the citizens of Boston as is the one before me.

The bill is objectionable for the further reason that it is in violation of the spirit of the statutes designed to prevent stock-watering, laws whose wisdom have been so

far confirmed by experience that all attempts to modify or repeal them have failed. The essence of stock-watering is, I take it to be, the issuance of stock not based upon actual property of the corporation. This bill provides that the money to be paid to the city of Boston may be provided for by issuing stock; but no provision is made for the redemption or cancellation of the stock at the end of the term. The money so paid is, in fact, expended, not for permanent improvements, but for rentals, and does not increase the value of the plant of the company. At the end of forty years the stock is free, and will be held by the company without property to show for it. There is, it is true, a provision for a sinking fund, but none whatever that the proceeds of the sinking fund shall be used to retire the stock so issued. * * *

The act of 1894, authorizing the construction of the existing subway, made careful provision in section 36 for the relocation by the commission of sewers, gas pipes, water pipes and other conduits; but the section of the present bill referring to the same subject (section 8) makes no such provision. It authorizes the commission to remove all such structures, but does not provide for their relocation or accommodation, either within or without the new subway; and it is doubtful whether they could be located within the new subway, even if in the judgment of the authorities they could be so placed without detriment to its use by the railway corporation. This, in my mind, is an important omission. The structures to which I refer are allowed to be placed beneath the streets for the public convenience, and explicit provision should be made for a continuance of their rights.

But there is a still more serious objection to the bill. It involves a surrender of public rights for an unusual term of years, and under unusual conditions. No street railway, with the exception of certain privileges heretofore assured to the West End Street Railway Company and the Boston Elevated Railway Company for special reasons, has other than a revocable franchise in a public way.

But this bill will, if it becomes a law, give to a private corporation a valuable monopoly in a great public thoroughfare and will perpetuate that monopoly for forty years. It not only binds this generation; it ties the hands of the generation to come. The surrender of rights which belong to the public, even for a brief term of years, should be permitted only after the most careful consideration, and for controlling reasons of public policy; but no exigency has been shown to exist to justify the taking away of such rights from a generation yet unborn.

No reason affecting the public welfare requires the adoption of this extraordinary proposition. The rapid transit of passengers by means of a subway is no longer an experiment. There can be no reasonable doubt that if such a structure be built and paid for by the city it can be leased to a transportation company for a sum amply sufficient to take care of the interest on the money borrowed therefor, and to provide a sinking fund for its ultimate redemption.

The charter of the Boston Elevated Railway Company, giving it certain exclusive rights for a period of twenty-five years, was granted to it chiefly upon the ground that the construction of an elevated railway, and the payment of damages that might accrue to abutters thereby, would involve so large an expenditure that capitalists would not be expected to invest their money without some assurance of permanency for a fixed term. The act of 1894, providing for the construction of the present subway, authorized the Boston Transit Commission to lease it for a term of fifty years, but the legislature of 1897 wisely cut down this period from fifty to twenty years. Neither of these grants, therefore, constitutes a sufficient precedent for the long term authorized by this bill.

No one can foresee what advance may be made in the methods and cost of transportation, in the volume of travel, or in the facilities that may be required for its accommodation in the next forty years. The history of passenger transportation during the last forty years, and the wonderful advance that has been made, not only in the amount of travel, but in the facilities afforded to passengers, is sufficient evidence of our inability to predict the future. This bill, however, while it does not restrict the company, ties the hands of the community. It will prevent the public from taking advantage of any such improvements in transportation facilities on the proposed route, excepting those that may be deemed by the company advantageous to it. A consideration of the disastrous results which would have followed if exclusive rights had been granted to a street railway company forty years ago to continue until the present time, illustrates the limitations which this bill would impose upon the public, and the unwisdom of its enactment.

All the special rights and privileges enjoyed by the Boston Elevated Railway Company will have expired in the year 1922. It has no moral or equitable claim to a continuance of those privileges, or of any exclusive privileges whatever. There is no good reason why the public should not at that time come into complete possession of its own, to the end that further franchises may then be granted in view of the improvements in the methods of rapid transit which may then have been made, and with the sole object of securing, in the highest degree and at the lowest cost, the convenience of the people of that day. But this bill, if approved, would go far in assuring a continuance of the command of the situation for a period of twenty years more. Although its rights in the existing subway will have ended, it is not difficult to foresee that a company in exclusive possession for a long term of years of a most important avenue of travel, will be in a position to control the situation and to prevent other transportation companies from competing upon equal terms. No such opportunity for control of the situation at that time should be permitted.

I am unable to give my assent to a bill which thus restricts the rights of the public, on the one hand, while, on the other hand, it insures valuable exclusive privileges to the company in question for so long a period; and that, too, without any public exigency requiring the passage of so extraordinary a measure.

The importance of the general principles laid down in this message, the fact that they have been endorsed by one house of the State legislature by a considerable majority warrants careful thought. Briefly summarized, they are:

1. Municipal franchises should not be granted to private corporations without the consent of the city in question.
2. The referendum is a proper method of determining local opinion.
3. Public rights should not be surrendered for an unusual term of years. Each generation should be left free to choose its own course.
4. Public property should not be surrendered to private interests without fair compensation.

5. Municipal subways are not experiments; their success has been demonstrated.

6. Stock watering in public service corporations should not be tolerated. Liabilities should equal approximately the actual value of the property.

Philadelphia conditions are most discouraging. The cry, "Is there no physician there?" calls forth only negative replies. But there is just cause for rejoicing when even one governor refuses to disregard public interests and when even one State refuses to bow the knee to corporation influences.

NEW YORK'S SUBWAY POLICY.

BY WILLIAM J. GAYNOR.

The recent message of Governor Crane, of Massachusetts, vetoing the Boston subway bill, has attracted much attention, and has been generally commended here in New York. There seems, however, to be a singular indisposition among some who profess to commend Governor Crane's action most warmly to refrain from stating just what the Boston scheme which he vetoed was, so that it might be compared, or contrasted, rather, with the manner in which our subways are being disposed of.

The bill which Governor Crane vetoed authorized the Boston Transit Commission to construct a subway under or near Washington street, at a carefully estimated cost of \$6,000,000, which was doubtless correct. The Boston Elevated Railway Company was by the provisions of the bill to pay the said amount to the city in cash, and have in return the completed subway for a term of 40 years, during which it was required to keep it in repair.

This is the scheme which Governor Crane vetoed as unjust to the city from a financial standpoint, as giving to "a private corporation a valuable monopoly in a great public thoroughfare," and as "taking away from a generation yet unborn" valuable public rights. And yet to us here in New York the Boston scheme looks by contrast like a great bargain for the city and the public, born and unborn. Stated in one way, it was that the Elevated Railway Company should pay the entire cost of construction, and in return have the subway for 40 years. Stated more in detail, the transit commissioners were to cause the city's bonds to be sold to raise the \$6,000,000. At $3\frac{1}{2}$ per cent. interest the city's total expenditure of principal and interest at the end of the 40 years would therefore

have been \$14,400,000. Against this the \$6,000,000 to be paid in by the company on the completion of the subway would, kept invested in the city's bonds and compounded, have amounted at the end of the 40 years to a total fund of \$23,755,800. This would have left the city at the end of the 40 years not only in possession of the subway free and clear, but also with a cash balance of \$9,355,800 in its favor on the transaction.

In what way has our great subway system in New York City been disposed of? In a way that Governor Crane, and those who like him stand for the rights of the many in such matters, could not sanction. When we read Governor Crane's prosaic words, and then turn to what our rapid transit board has done and is planning to further do, under the peculiar statute which gives it its powers, we perceive the difference between legislation and official action favoring the community and favoring the few against the community in such matters. Under Governor Crane the Boston transit commissioners will certainly not become a steering committee to bring about ways of presenting to a few individuals the greatest public franchises almost as gifts. The charter of the new city of New York in express provisions puts an end to that sort of thing, and many of us thought it was at an end. How long are the provisions of the charter in that respect to be frustrated by our rapid transit commissioners, acting outside of the charter and under the provisions of a separate statute?

The contract under which our rapid transit commissioners have disposed of our system of subways through the boroughs of Manhattan and the Bronx is as follows: The contractor is to construct them for the sum of \$35,000,000, to be paid to him by the city as the work progresses. This sum was estimated in advance as the cost by the commissioners; and the statute evidently intends that the contractor shall make no profit on the construction, but only on his lease of the completed work. It is now quite well known, however, that the contractor will make a very large profit on the construction. Such profit is put at upwards of \$8,000,000 by competent persons, i. e., at about 25 per cent., the cost having been estimated altogether too high, although so many tunnels had been built in the world that the approximate, if not exact, cost of such work, could, it might well seem, have been easily and ac-

curately figured out in advance, especially (as is the case here) where it is mainly through rock, which is the least costly kind of tunneling.

When the subway is completed it goes to the contractor by the terms of the contract for a term of 50 years, with a right of renewal for 25 years additional. And what profit does the city get in return? Not to exceed one per cent. per annum for such term on the said cost of construction. Instead of the contractor paying the cost of construction, and taking the subway for 40 years in return, as was the Boston scheme which Governor Crane vetoed, the city pays the cost of construction, allows the contractor to make a huge profit thereon, and in addition gives him the completed subway and railroad for 50 years, with a right to an additional 25 years, the yearly rental profit to the city not to exceed one per cent. on the cost of construction. This one per cent. would pay the principal of such cost in a century.

To laud this as a great bargain for the community seems only possible to those who rate the average intelligence of the community as contemptible, and look with disfavor, if not disgust, on any suggestion that the community has a right to share in the income from its public utilities and franchises. It is true that if this one per cent. were put into a sinking fund and compounded it would produce a fund equal to such principal in less than a century; but the showing would still be paltry as a return for such a valuable property, the greatest revenue producing municipal railroad property in the world. If so accumulated at $3\frac{1}{2}$ per cent. during the 40 years' term which Governor Crane condemned, the fund at the end would still lack about \$6,000,000 of paying such principal.

But on what principle of finance may the contractor to whom the franchise is farmed out be credited with the interest which the city can get on the amount paid in as rental? The thing seems to be suggested and figured out only by those who desire to make that which is actually a wrong to the community appear to be a good bargain for it. It is true also that the said contractor has to pay to the city yearly the 3 or $3\frac{1}{2}$ per cent. interest which it pays on its bonds issued for construction. Heretofore, in selling these bonds, the controller has "tried the experiment," as he called it, of selling 3 per cent. bonds, which makes a fine saving to the con-

tractor without any loss to the city. But this reimbursement to the city of the interest it pays is no profit to the city; and, besides, if the franchise had been given away for the 50 or 75 years, leaving the donee to build at his own expense, he could not have borrowed the money at such a low rate.

The statute under which our rapid transit commissioners act could scarcely be better drafted to work to the disadvantage of the community. The fundamental wrong of it is that, while the city constructs at its own expense, the public work when completed is not at the city's immediate disposal to lease to the highest bidder for a moderate term of years. The statute permits a contractor to do the work and take a lease for 50 years, with a renewal of 25 years, to be put up for bids at the outset. That it is impossible for such a method to result otherwise than disadvantageously to the community is manifest. Not to mention other reasons, many would bid for the contract to construct who know nothing of operating railroads and do not want to go into that business, and many would bid for a lease of a completed subway railroad who are not contractors and have no facilities for constructing it. For one who would bid in advance for the combined contract to construct and operate for a term of years, many would bid for the contract to construct only, and many others for the lease only.

The latest illustration of what our rapid transit board is doing is furnished by their completed scheme to build at the expense of the city and lease in the same way for 75 years a railroad subway from the terminus of the Long Island Railroad in Brooklyn borough to the East river and thence under the river to a point in Manhattan borough, all in the same manner that the subways in Manhattan and the Bronx have been disposed of. The city charter permitted such subways to be built by railroad companies at their own cost on a franchise of 25 years, with a right to a renewal for 25 years additional, but only on the basis of a valuation to be made at the end of the original term.

Two years ago the Long Island Railroad Company sent an agent to Albany and had the city charter amended by making the term 50 years, with such right of renewal for 25 years. This being accomplished, it applied to our Municipal Assembly for the franchise to construct the said subway from its Brooklyn terminus to

Manhattan. So eager was it to get so valuable a franchise that members of the Municipal Assembly were under the belief that it tried to bribe them to vote for it, if we can credit the public statement of one of them that such an attempt to bribe was actually made. As the member who made the statement and the official who denied it are deemed of equal reputation, the public has to draw its own conclusion from all the circumstances. However this matter may be, the company afterwards withdrew its application.

The reason for this was apparent enough to many at the time, and recently became apparent to every one, when the rapid transit board came forward with its scheme to build such subway at the expense of the city. The company, of course, withdrew its application for the franchise to construct the tunnel at its own cost when the rapid transit commissioners made known to it that they would construct it at the cost of the city. Such tunnel is only a continuation of the said railroad company's tracks (which are also being placed in a tunnel under an act passed at the last session of the Legislature) from their termination in Brooklyn to Manhattan; and there is no other railroad that could use it, if its capacity would suffice for such additional use. There is no possibility whatever of competition for a lease of it. It is literally to be built by the city for the Long Island Railroad Company.

The public statement of the president of the company to be used at the hearing before the mayor that the company would not bid for the contract of course deceived no informed person. It was intended for other persons. The railroad company is not a contractor. In the judgment of competent persons this tunnel at least doubles the value of the Brooklyn branch of the company.

With this object lesson before the public it does not seem possible that the statute which enables such things to be done can be allowed to survive. What does Governor Odell say to it? We know what Governor Crane—the governor of the best governed State in the world—says.

There is one sentence in Governor Crane's message which makes strange reading for certain good people here who profess to tell us that capital would build no street railroads for us except on franchises in perpetuity, or for 50 or 75 years, which is about the same thing. It is as follows: "No street railway (in Boston),

with the exception of certain privileges heretofore assured to the West End Street Railway Company and the Boston Elevated Railway Company for special reasons, has other than a revocable franchise in a public way."

STREET RAILWAYS OF CHICAGO.

TO THE CIVIC FEDERATION OF CHICAGO:

Your committee appointed to conduct an examination of the true financial condition of the Street Railways of Chicago, so far as the same is shown by the books of account and corporate records of the various street railway companies, beg leave to report:

Immediately upon their appointment, your committee took up and pressed the negotiations then pending to obtain access to the corporate records and books of account, with the result that Mr. Edmund F. Bard, an expert accountant of this city, was employed to make the examination, the details of which are embodied in his report herewith submitted. The report speaks for itself and bears evidence of the ability and fidelity with which the work was done.

This examination could not have been had without the consent and active co-operation of the street railway companies themselves, and full recognition is given to the courtesies extended and the service thus rendered by their officials to your committee, the Civic Federation and the public generally.

The question of compensation for franchises must necessarily turn on some plan of profit sharing, for it is only the excess of profit remaining after payment of all proper operating and maintenance charges, together with reasonable returns on the investment, which can justly be demanded by the public. The first question is, therefore, what is the amount of actual profit.

This preliminary investigation is the one to which your committee has addressed itself. We believe no similar publication of facts has ever been made, for the reason that never before have street railway books been opened to a similar investigation.

Among the most important facts involved in the problem under consideration must be the amount of capital invested; the mode of issuing the stock, bonds and other securities of the companies; the

mode of charging expenditures and to what extent rebuilding is charged to construction or capital account; the leases or other agreements existing between different companies; the amount of dividends which have been paid; the gross and net income; the cost of property used in operating street railways; the present value of such property; and others which will readily occur.

Obviously, it is only from the books and records of the companies that many of these facts can be ascertained at all; and it seems that not all of them have ever been fully ascertained even by the companies themselves, previous to this examination.

Your committee had the report of Mr. Bard in hand early in 1899, but it was embarrassed by the extreme desirability of having the report accompanied when published by such summaries, explanatory matter, etc., as would render it more easily understood and thus increase its usefulness. Besides, in the opinion of your committee, it is mainly with reference to formulating ordinances relating to the street railways of Chicago, and particularly to renewals of the ordinances soon to expire by limitation rather than the framing of statutes to be passed by the legislature, that this information is most pertinent and valuable.

It is a subject of sincere congratulation that your committee has secured the services of Dr. Milo Roy Maltbie, Editor of *MUNICIPAL AFFAIRS*, and a well-known writer on municipal and economic subjects, to prepare the accompanying summary. While the particular views expressed by him are his own, we feel sure they will carry added weight for that reason. The committee does not think it desirable, however, at this time to formulate any policy nor to adopt any of the inferences drawn from the facts disclosed. Those facts it deems weighty and important and their present publication timely. This report is submitted in the full confidence that it will aid in the solution and the speedy, just and final settlement of a situation not satisfactory at present from any point of view, and one which is intolerable in many of its phases.

Respectfully submitted.

WILLIAM A. GILES, *Chairman*;
ADOLPH NATHAN,
JOSIAH L. LOMBARD,
JOHN H. GRAY,
NEWTON A. PARTRIDGE.

ANALYSIS OF FINANCIAL OPERATIONS

BY MILO ROY MALTBYE.

The examination of the books of account and records of the principal street railway companies of Chicago made by Mr. Edmund F. Bard is altogether unique. I know of no other instance in the United States where a street railway company voluntarily has opened its books and permitted an expert accountant to examine in detail all its financial operations. For the first time, the inner workings of several large companies in a large and important city are brought to view. For the first time, we know exactly what it has cost to construct different kinds of street railways, what allowance has been made for depreciation, what franchises are worth, how they have been capitalized, what methods have been adopted in financing these enterprises, etc.

To comprehend the full value and importance of this study, a brief account of the street railway situation in Chicago and of the circumstances under which the examination of the books was permitted, is necessary.

Early Operations.

Street railways were first operated in Chicago in 1859. A period of slow development followed, during which all street cars were operated by animal power, except a few suburban steam dummy lines, with the consequent inadequate service and high operating cost. It was not until 1880 that serious steps were taken to improve the service by the adoption of cable traction.

At this time there were three companies operating in three quite distinct parts of the city, viz.: (1) the Chicago City Railway Company on the South Side, that portion of the city lying south of the river and east of the south branch; (2) the North Chicago City Railway Company on the North Side, north of the river and east of the north branch, and (3) the Chicago West Division Railway Company on the West Side, west of the north and south branches.

Each had a monopoly in its area, due partially to the topographical nature of the city and partially to agreement, tacit or otherwise. The river has always rendered communication between the three sections difficult and expensive. The natural course of traffic is to and from the center of the city along radial lines, very few persons wishing to pass between the West and South Sides or the West and North Sides. (See Exhibit I, § 9.)

The Chicago City Railway Company was the first to adopt cable traction, being forced to do so by the competition of steam roads which paralleled its main lines. The State Street and Cottage Grove Avenue lines were the first converted, beginning about January 1, 1881. The other companies began to adopt mechanical traction several years later—1886 and 1887. Early in the nineties electricity was introduced and now the horse railroad has almost disappeared, and the cable, once so common, is giving way to the trolley.

Duration of Franchises.

The three roads above named, and others subsequently organized, secured most of their present franchises to use the streets in the seventies or eighties, for periods not exceeding twenty years, the legislative act of 1874 having fixed this as the maximum limit. The most sweeping city ordinance was that of July 30, 1883, which extended all of the existing franchises to use the streets to 1903. Several other ordinances have since been passed, notably in 1886 and 1887, but almost without exception the periods have so been fixed as to terminate in 1903, 1906, 1907, or thereabouts. In some cases no limit was stated, and the city may terminate these franchises at any time.

The only exception to the rule that street railway franchises have been granted for short periods, usually about twenty or twenty-five years, is the "Ninety-Nine-Year" Act passed in 1865. This Act extended the life of the Chicago City Railway Co., the North Chicago City Railway Co. and the Chicago West Division Railway Co. to ninety-nine years, the act of incorporation passed in 1859 having restricted it to twenty-five years. It also attempted apparently to extend the franchises to use the streets already granted to ninety-nine years, but the language is not explicit. It certainly was not intended to include all subsequent grants made by

the city. Thus, under the interpretation most favorable to the companies, there are only a few franchises to use the streets, most franchises having been granted since 1865, which could by any possibility run on until 1958, and if the courts should strictly construe the Ninety-Nine-Year Act, all would terminate at dates not more remote than 1916, most of them about 1903.¹

Legislation Attempted.

The situation in 1897 was briefly this: Most of the franchises were to expire in ten years or less. The cable roads needed, or soon would need, to be replaced by electric lines. But of course capitalists would not furnish the requisite funds upon such short-term franchises. Furthermore, unless the periods were extended, the price of the securities would soon begin to decline, gradually reaching a very low figure. Also, the political situation seemed favorable to the companies; the council and the legislature were apparently friendly.

Bills were introduced into the legislature, currently known as the Humphrey bills, extending for fifty years the franchise rights granted by city ordinances, giving the companies many valuable privileges and requiring in return very little from the companies either in the way of compensation or public control. The corporations at first seemed to have the necessary support to enact the measures, but popular feeling ran so high that it influenced many members of the legislature, and, after a very bitter fight, the bills were voted down by a large majority.

The street railway interests then tried a new measure, the Allen bill, which contained some of the most objectionable features of the Humphrey bill, but which was an improvement in other respects.² This bill became a law in the summer of 1897. In November, 1898, elections were held for seats in the legislature, and the whole State was so worked up by the prostitution of public interests for the

¹The roads have been so unsuccessful in getting statutes or ordinances extending their franchise rights in the streets that they now are attempting to get a judicial interpretation of the Act of 1865, and claim that the 99-year clause applies to all franchise rights. No one else believes this, but it may be that the courts will hold that it applies to all grants previous to 1865, which will leave the roads a few important franchises.

²The principal difference between the two bills was that the Humphrey bill itself extended the franchise rights of the companies 50 years; the Allen bill authorized city authorities to do this.

aggrandizement of a few corporations that nearly every man who had supported the Humphrey and Allen bills was either refused a renomination or defeated at the polls. The legislature which met the following winter—1899—repealed the Allen law by a practically unanimous vote before the Chicago companies had derived any benefit therefrom. The city council refused to exercise the power conferred by the Allen law and extend franchises fifty years. Thus, in 1899, the street railroad interests were precisely where they were in 1896, and there was little prospect of getting favors from the legislature or the city council. The public was extremely hostile and suspicious; the council was no longer controlled by "the gang," and the legislature had been taught a lesson it was not likely soon to forget. Evidently the companies were hard pressed; and only five years remained before the expiration of many of their franchises.

All of this experience had taught the companies that the public could no longer be disregarded. Conditions had greatly changed, and the policy of the corporations must change also.

The Scope of the Investigation.

In June, 1898, after the enactment of the Allen law and after the city council had refused to accede to the demands of the companies for an extension of franchises, the Civic Federation invited Mr. C. T. Yerkes, who controlled the North and West Side companies and who was the spokesman for these companies in the controversy, to give an address at a public meeting on the street railway situation. He complied and evinced a strong desire to placate the public and to secure co-operation in formulating and procuring the needed ordinances. Mr. Newton A. Partridge, who was principal spokesman for the Civic Federation, insisted that the city could not be expected to go into a blind pool and approve a plan suggested by the street railway companies when all of the data regarding the operations of the companies were unknown to it. That would be playing with loaded dice. If fair treatment were to be expected, after the public had been so shamefully abused and deceived in the two years just passed, the books of the companies must be opened to examination by an expert.

This Mr. Yerkes subsequently consented to do, recognizing the logic of the argument. A committee of the Civic Federation was

appointed, consisting of Josiah L. Lombard (chairman), Adolph Nathan, Newton A. Partridge, Sigmund Zeisler, William A. Giles, John H. Gray, Paul O. Stensland, Edwin Burritt Smith, Thos. C. MacMillan, E. G. Keith, Franklin MacVeagh, Zina R. Carter, John W. Ela and Wm. K. Ackerman. This committee was reorganized in 1900 with the following members: Josiah L. Lombard (chairman), William A. Giles, Adolph Nathan, Franklin H. Head, John H. Gray, James L. Houghteling, Newton A. Partridge, Edwin Burritt Smith, Sigmund Zeisler, Edmund J. James, Zina R. Carter and John W. Ela. The sub-committee, which had direct management and supervision of the investigation and which signs this report, consisted of William A. Giles (chairman), Adolph Nathan, Josiah L. Lombard, Newton A. Partridge and John H. Gray.

Mr. Yerkes did not speak for the Chicago City Railway Co., as he did not control this road, but when it was found that the other lines were to open their books, the South Side company agreed to do the same. Mr. Edmund F. Bard, a professional accountant, immediately began work, and the results of his investigations are Exhibits I. to VI. He had access to the books of account and corporation records of all the important surface roads. Several of the suburban lines recently constructed are not included, as they have been in operation only a short time. These are relatively unimportant, as their business is small, and the companies treated herein hold the key to the whole situation. Mr. Bard's report covers the Chicago City Railway Co., the North Chicago City Railway Co., the North Chicago Street Railroad Co., the Chicago West Division Railway Co., the Chicago Passenger Railway Co. and the West Chicago Street Railroad Co. It ends with December 31, 1897—the last year for which complete data were available when he began his work. To bring the monograph down to date—July 1, 1901—the facts for the last three years and a half have been gathered from the financial papers, principally the *Economist*. However, few changes have been made since January 1, 1898, and they do not materially alter the figures Mr. Bard gives for 1897.

Face Value of Liabilities.

Of all the many facts established by this examination, those bearing upon the value of the franchises will be most eagerly sought

for. To compute this value one first finds the market value of all outstanding liabilities, or, in other words, the sum which must be expended in order to gain complete control of the companies. It is evident that this can be done only by purchasing at *market* value all outstanding stock, bonds and other evidences of indebtedness. From the amount thus expended there must be subtracted the *market* value of all assets, or the sum which one would receive if all the properties except the franchises were sold. The remainder evidently is the market value of the franchise.

The liabilities of the various companies July 1, 1901, were as follows:

CHICAGO CITY RAILWAY COMPANY

Capital stock.....	\$18,000,000.00
Miscellaneous obligations.....	232,488.22
Total	\$18,232,488.22

CHICAGO UNION TRACTION COMPANY.¹

Capital stock, preferred.....	\$12,000,000.00
Capital stock, common.....	20,000,000.00
Miscellaneous accounts payable.....	2,233,165.00
Total	\$34,233,165.00

NORTH CHICAGO CITY RAILWAY COMPANY.

Capital stock.....	\$500,000.00
Bonds, 4½ and 4 per cent.....	2,997,000.00
Due North Chicago Street R. R. Co.....	6,172,331.89
Total	\$9,669,331.89

NORTH CHICAGO STREET RAILROAD COMPANY.

Capital stock.....	\$7,920,000.00
First mortgage bonds, 5 per cent.....	4,800,000.00
Bills payable.....	1,196,200.00
Miscellaneous accounts.....	91,395.08
Total	\$14,007,595.08

CHICAGO PASSENGER RAILWAY COMPANY.

Capital stock.....	\$1,340,300.00
Bonds, 5 and 6 per cent.....	1,734,000.00
Due West Chicago Street Railroad Co.....	49,158.49
Total	\$3,123,458.49

¹The Chicago Union Traction Co. has not been examined by Mr. Bard, as it was organized after he made his investigation. These items have been taken from the company's report, as published in the *Investors' Manual* for 1901. The published statement of June 30, 1901, does not give assets or liabilities. The figures given cannot be far from accurate, however.

CHICAGO WEST DIVISION RAILWAY COMPANY.

Capital stock.....	\$1,250,000.00
First mortgage bonds.....	4,070,000.00
Due West Chicago Street Railroad Co.....	4,869,998.38
Total	\$10,189,998.38

WEST CHICAGO STREET RAILROAD COMPANY.

Capital stock.....	\$13,189,000.00
First mortgage and consolidated bonds, 5 per cent	10,000,000.00
Bills payable, 4½ per cent, miscellaneous.....	5,169,252.67
Total	\$28,358,252.67
<i>A total face value of.....</i>	<i>\$117,814,289.73</i>

Market Value of Securities.

Proceeding now to find the value of these securities, the first question that arises is, What date shall be taken at which to compute their market value? In this résumé I have attempted to make it complete to July 1, 1901, which would suggest the selection of that date. But the quotations for one day may not represent the true state of the market. To avoid this error, the Stock Exchange quotations for the first two weeks in July have been used. This period is particularly well suited for the purpose, as the market was normal, showing no marked fluctuations, and as the period was one neither of boom prices nor marked depression.

The prices secured by averaging the stock quotations for this period are: Chicago City Railroad Co., 209; Union Traction Co., preferred, 60; common, 19; North Chicago Street Railroad Co., 200; West Chicago Street Railroad Co., 100. The stocks of three companies were not dealt in during July 1-13, but accepting the prices used in the Harlan report, which is considered very conservative, we have: North Chicago City Railway Co., 600; Chicago West Division Railway Co., 650; Chicago Passenger Railway Co., 100.

Computing market values at these figures, the liabilities of the Chicago City Railway Co. are worth \$37,852,488.22, those of the Chicago Union Traction Co. \$13,233,165, in each case accepting the miscellaneous obligations at their face value.

In the case of the North Chicago City Railway Co. only 2,499 shares of stock are to be valued, as the purchase of the stock and bonds of the Chicago Union Traction Co. would itself transfer 2,501 shares which this company took over from the North Chicago Street Railroad Co., when it made the agreement of 1899. (See

infra.) These shares, together with the other obligations taken at par, have a market value of \$10,668,731.89.

The Chicago Union Traction Co. also owns \$2,000,000 of stock in the North Chicago Street Railroad Co. The market value of the remaining 59,200 shares would be \$11,840,000. Adding the other liabilities at face value, we have a total of \$17,927,595.08.

Turning to the West Side roads, the liabilities of the Chicago Passenger Railway Co. amount to \$2,393,458.49. Seven thousand three hundred shares of stock are owned by the Chicago Union Traction Co., which would be purchased with the stock and bonds of that company, leaving 6,103 to be valued at \$100 per share, or \$610,300. The bonds, bearing 5 and 6 per cent. interest, are worth more than par, but their face value has been taken.

The Chicago West Division Railway Co. has liabilities yet outstanding valued at \$13,001,848.38; 6,251 shares of its stock being owned by the Chicago Union Traction Co., and the bonds being taken at par, although selling at a premium.

Of the West Chicago Street Railroad Co.'s stock, \$3,200,000 are owned by the Chicago Union Traction Co. This would leave 99,890 shares at \$100 per share, or \$9,989,000, plus \$15,169,252.67 in other liabilities at par value, or a total of \$25,158,252.67.

MARKET VALUE OF LIABILITIES.

Chicago City Railway Co.....	\$37,852,488.22
Chicago Union Traction Co.....	13,233,165.00
North Chicago City Railway Co.....	10,668,731.89
North Chicago Street Railroad Co.....	17,927,595.08
Chicago Passenger Railway Co.....	2,393,458.49
Chicago West Division Railway Co.....	13,001,848.38
West Chicago Street Railroad Co.....	25,158,252.67
Total	\$120,235,539.73 ¹

Value of Assets.

From this amount one must subtract the present value of all property, real and personal, except the franchise rights in the streets.

After careful analyses of the accounts, Mr. Bard computes the *total original cost of all property belonging to the six companies, exclu-*

¹This is a very conservative estimate. The bonds have been computed at par, whereas the latest quotations showed a premium in almost every instance. The assumed market values of stocks are below what they have been selling for. But it is better to give the companies the benefit of all reasonable doubts than to retard private enterprise by harsh treatment.

sive of the franchises, upon December 31, 1897, at \$41,328,379.72, distributed as follows:¹

Chicago City Railway Co.....	\$11,603,960.71
North Chicago City Railway Co.....	4,616,909.47
North Chicago Street Railroad Co.....	6,060,777.00
Chicago Passenger Railway Co.....	1,677,411.29
Chicago West Division Railway Co.....	5,783,713.65
West Chicago Street Railroad Co.....	11,585,607.60
Total	\$41,328,379.72

In order to bring these calculations up to date, I have incorporated the changes made since January 1, 1898, which are few and quite accurately known. They consist principally in the organization of a new company—the Chicago Union Traction Co.—the refunding of a small amount of indebtedness and the construction of a small amount of electric road. With these changes, which alter but one item and add a new one, I find that upon July 1, 1901, the total original cost of all property except the franchises was \$44,922,011.72, apportioned as follows:

Chicago City Railway Co.....	12,984,460.71
Chicago Union Traction Co.....	\$2,213,132.00
North Chicago City Railway Co.....	4,616,909.47
North Chicago Street Railroad Co.....	6,060,777.00
Chicago Passenger Railway Co.....	1,677,411.29
Chicago West Division Railway Co.....	5,783,713.65
West Chicago Street Railroad Co.....	11,585,607.60
Total	\$44,922,011.72

But in this supposititious process of buying all liabilities and of selling all property three cash payments would be made from one company to another, which are not included in the assets above, as Mr. Bard shows that they have nothing to secure them except franchises, so that the assets of two companies would be larger than indicated in these tables. I refer to \$6,172,331.89 due the North Chicago Street Railroad Co. by the North Chicago City Railway Co.; \$49,158.49 due the West Chicago Street Railroad Co. by the Chicago Passenger Railway Co.; and \$4,869,998.38 due the same road by the Chicago West Division Railway Co. These payments would alter the assets somewhat, giving the following results:

¹In valuing the assets, every piece of property has been included except franchises. Thus the above items include not only the value of the plant and equipment necessary to operate the road, but stocks and bonds owned, accounts receivable, cash on hand, etc. I will return to this point later.

ORIGINAL COST VALUE OF FINAL ASSETS JULY 1, 1901.

Chicago City Railway Co.....	\$12,984,460.71
Chicago Union Traction Co. ¹	2,213,132.00
North Chicago City Railway Co.....	4,616,909.47
North Chicago Street Railroad Co.....	12,233,108.89
Chicago Passenger Railway Co..	1,677,411.29
Chicago West Division Railway Co.....	5,783,713.65
West Chicago Street Railroad Co.....	16,504,764.47
Total.....	\$56,013,500.48

But these computations allow nothing for depreciation since "original costs" were expended. Of course, the books show nothing as to what this depreciation would be, and it is possible only to make a rough estimate. This I have done, always keeping well within conservative bounds. *The estimated present market value of all property, exclusive of franchises, is \$34,750,000, or \$45,841,488.76 if one include the amounts due from company to company.*²

		Amounts includ'g Inter-Company Obligations.
Chicago City Railway Co.....	\$9,800,000	\$9,800,000.00
Chicago Union Traction Co.....	2,000,000	2,000,000.00
North Chicago City Railway Co.....	2,300,000	2,300,000.00
North Chicago Street Railroad.....	5,250,000	11,422,331.89
Chicago Passenger Railway Co.....	1,300,000	1,300,000.00
Chicago West Division Railway Co.....	4,000,000	4,000,000.00
West Chicago Street Railroad Co.....	10,100,000	15,019,156.87
Total	\$34,750,000	\$45,841,488.76

Value of Franchises.

Deducting these amounts from the value of the liabilities as computed above, we have:

Value of liabilities, July 1, 1901.....	\$120,235,539.73
Original cost value of assets, as corrected.....	56,013,500.48
Value of franchises, upon basis of original cost.	\$64,222,039.25
Value of liabilities, July 1, 1901.....	\$120,235,539.73
Estimated present value of assets.....	45,841,488.76
Value of franchise.....	\$74,394,050.97

¹This figure is for July 1, 1900.

²Attention is called to the fact that I am here speaking of "assets," not "plant" nor "productive assets," but *all* assets, whether they have or have not any value at present.

This amount represents the minimum value, for at every point the companies have been given the benefit of the doubt. The depreciation since time of construction has been estimated at a very low figure. The stock, bonds, accounts receivable, etc., have been estimated at their face value, although, in many instances, their *real* value is almost nothing, for they produce little income and are secured by property of little value. Further, the value of the franchises *to the city* is much greater than \$75,000,000, for the market value of the stocks is undoubtedly influenced by the probable early termination of the franchises. If perpetual grants were given, market values would go up, and also franchise values, as a result.

Market Value a Fair Basis.

The above method of computing the value of franchises has so often been criticised that it may not be out of place briefly to state why it is believed to be fair and equitable, and why it has been adopted here.

The question, What is the value of street railway properties? is precisely analagous to the question which confronts the assessor when trying to value real estate, or the business man when attempting to find the worth of any piece of property. Each goes to those who are most familiar with such properties, and wisely so. Then why should we not go to the Stock Exchange, where securities are dealt in by those most competent to judge, and accept the opinion of such experts as shown by actual sales?¹

The rejoinder that only a small number of shares are sold in a brief period, and that if all the stock were dumped upon the market, prices would be much lower, has no weight. The same would be true of everything. If all the corn were to be dumped upon the Board of Trade at once prices would go to pieces. But that does not cause the dealer to conclude that the "going price" is too high and that he had better "sell short." Far from it; instead, he will almost invariably assert that the present value is as correctly estimated by the market quotations as it is possible to fix it. The small amount of stock sold at current prices indicates that the holders consider it worth more than is bid, rather than that the bids are too high.

¹In this connection, see citations from Federal and State decisions, pages 390-2 *supra*.

Corporation lawyers sometimes plead that taking the market value capitalizes good will, skill and ability. The same excuse might be offered by the old settler who, believing real estate in a certain locality will increase in price, secures all of it he can; and when his predictions are justified, argues that his land ought not be assessed at its present value, for by so doing a burden is imposed upon his foresight and skill. Again, it would be equally true that where poor management is shown, *lack* of ability has influenced market values, and that they are lower than they should be and would be ordinarily. It does not seem that such an unusual amount of skill and foresight has been used in the management of the Chicago companies as to call for reduction in the market values to bring the quotations down to the normal level, or to such as the average railway manager would produce. If I am not mistaken, it would be easily possible to secure a considerable number of men, any one of whom could manage the street railways of Chicago as efficiently as they have been managed. It is only when a brilliant manager gives to the securities a higher value than they would have under the average manager that a reduction from the market price ought to be made. This is certainly not the condition of affairs in Chicago at present.

Meaning of "Original Cost."

The methods of valuing the assets will also withstand criticism, and to make perfectly clear what is fact and what is estimate, two sets of figures have been given: (1) original cost; (2) estimated present value, allowance having been made for depreciation.

In working out the figures for "original cost value of assets," Mr. Bard first obtained an exact and complete inventory of all property, not including the franchise, but mileage and kind of track, equipment, rolling stock, real estate, buildings, supplies, stocks and bonds owned, accounts receivable, etc. He then proceeded to ascertain from the books the "original cost" of these various items, viz., the cost when originally purchased.

This amount is obviously not what the property would bring at public or private sale, for most of the items have depreciated, and one—land—may have, probably has in every case, appreciated. And if there are stocks and bonds, it is very seldom that their face value is their market value. It should be emphasized, however,

that the amount above given as the original cost is more than fair to the companies, for all in all the depreciation is considerably greater than the increase in values. The market value is much less than the "original cost" value. If, when the franchises expire, the city should pay the "original cost" value as above computed, the companies would be very generously treated, even more generously than they in justice can expect. This is especially true in view of the fact that the companies have always paid large dividends.

How to Obtain Present Value.

In order to obtain the *present* value of the franchises, it is necessary, therefore, to estimate the extent to which the various properties have depreciated. Now depreciation arises principally from two sources: (1) Wear due to use, (2) introduction of new inventions which make necessary the renewal of machinery and plant before they are worn out.

Depreciation due to wear may be, and often is, provided for by charges for "repairs and maintenance" paid out of earnings. To capitalize such expenses, either directly by charging them to "construction account," or indirectly, by failing to keep the system in good condition, depending upon stock or bond issues to replace worn-out plant, is bad financiering. Wages might be capitalized with equal propriety. The proper way is to keep the plant and equipment fully repaired, and to pay the expense out of earnings. When this is done, no depreciation is chargeable for wear.¹

The kind of depreciation which is most generally disregarded is that due to the substitution of new inventions for old and less desirable processes. For example, the old horse railroads were still capable of giving fairly good service, as horse roads go, when converted into cable or electric traction; but it was impossible longer to continue animal power. The conversion involved considerable loss—a loss almost equivalent to the original cost of the road, assuming that the road was in good repair. Now this depreciation should have been guarded against and a fund created (equal to the cost of the old track and equipment) so that part of the expense of constructing the new road would have been paid without issuing

¹It may be urged that it is impossible to keep a road in as good condition as in the beginning. Quite true. But it is possible to produce the same result by accumulating a sinking fund or depreciation account from payments from earnings.

new stock or bonds, or the old stock and bonds retired. The amount of this fund should always equal, as nearly as possible, the value of the plant and equipment displaced. In other words, the capital stock, bonds and other liabilities, less sinking funds, reserve funds, depreciation funds, etc., should always be equivalent to the market value of the properties, excluding the franchise. Of course, it is impossible to keep them *exactly* equal, as no one can forecast just when new inventions will revolutionize existing systems, but there should always be some near approximation. And the amount placed each year to the credit of a depreciation account should be paid from earnings, just as much as expenditures for coal or oil.

Depreciation Not Written Off by Companies.

With these rules as a standard, let us examine the operations of the companies to see how far the principles have been applied.

Comparing the face value of the liabilities outstanding upon July 1, 1901—amounting to \$117,814,289.73—with the “original cost value of the assets,” placed at \$56,013,500.48, there is an excess of \$61,800,789.25. This shows that even allowing for no depreciation since the present plants were constructed, there are nearly \$62,000,000 which should have been written off long ago. Taking the estimated *present* market value of the assets—\$45,841,488.76—a very conservative estimate, the depreciation which has not been provided for amounts to \$71,972,800.97 at least.¹ In other words, there is “water” to the amount of \$72,000,000 in the liabilities of the companies.

When the operations of the companies are examined in detail, which will be done immediately, one will see how this result was brought about. Expenditures for repairs and maintenance have been paid out of earnings, but these have seldom, if ever, been of sufficient amount to keep the plant in as good condition as when built. Further, no depreciation fund has been accumulated to write off old capital when the new plant was purchased; but, instead, stocks and bonds have been issued to provide the new funds, and

¹It may be well again to call attention to the fact that this sum does not represent the estimated value of the *plant* and *equipment* of the street railroads alone, but includes *securities* held by a few of the companies, cash on hand, bills receivable, etc. Further, the total depreciation upon plant, not including real estate, would be much greater, for from the depreciation of the plant one has to subtract the appreciation of land to get at the net depreciation of the assets.

the old stocks and bonds, incurred for worn-out and antiquated plant, have been retained as part of the liabilities. Thus the present systems are made to earn dividends not only upon existing capital, but upon the "original cost" of scrap iron and refuse. In a few instances stock and bond dividends have been declared without any attempt to cover up the watering process.

Ordinarily in business such a process would be disastrous, retarding progress and ending in bankruptcy, but in the case of municipal monopolies it is different. The street railway business is not a competitive business. Competition has been eliminated in Chicago between the surface lines. Franchises are very valuable, and the watering of stock by failing to write off depreciation has been counterbalanced by the increasing value of the franchises, so that the companies pay interest upon bonds and still make a reasonable profit upon the stock, which really includes at least \$72,000,000 of water. It is interesting to note that this amount of water is almost equal to the value of the franchises as estimated above, which shows that the companies have virtually capitalized the franchises.

From one point of view, it matters little whether liabilities are \$50,000,000 or \$500,000,000. What do the stockholders care whether they get 10 per cent. on \$50,000,000 or 1 per cent. on \$500,000,000. The net profit is \$5,000,000 in each case. But there are serious objections to stock watering. In the first place, there will come a time when readjustment is necessary, when the water must be squeezed out. This is apt to discredit a company and make investors suspicious of its securities. In the second place, the adoption of new processes is retarded, because the capital nominally invested is already so large as to make the negotiation of new issues difficult. In the third place, it throws dust in the eyes of the public, for they do not know how much capital is actually invested, and are inclined to assume that the securities represent the true amount. Thus companies paying 5 per cent. are often left to themselves, and others paying 20 per cent. are discussed and investigated, when, as an actual fact, the former are paying the larger rate of profit upon the true amount of capital invested. This is a principal reason why companies operating franchises have almost invariably so increased their capital stock as to bring the dividends down to the average

rate in other lines of business.¹ Then, in the fourth place, if the securities greatly exceed the value of the plant, the company is in a position to compromise, to give the city something, without in reality relinquishing much. And if dividends are near the going rate in other lines, the cry "confiscation" may be raised whenever the public attempts to make the company give compensation for franchise rights.

Rate of Profit.

Having found the value of the plant and the amount of water in the securities, we are now able to compute the rate of profit upon the amount of capital actually invested.

The gross earnings of the Chicago Union Traction Co.—the lessee of the five roads upon the North and West sides—for the year ending June 30, 1901, were \$7,289,139. Other receipts, exclusive of the income from stocks of other street railway corporations in Chicago, amounted to \$107,355, making a total of \$7,396,494. The expenses amounted to \$4,335,155, leaving a profit of \$3,061,339. The Chicago City Railway Co. received, during 1900, \$5,543,180, expended \$3,655,002, and had a profit of \$1,888,178. The total gross earnings of both companies were, therefore, \$12,939,674, and the profits \$4,949,517.

What now is the capital value upon which to compute the rate of profit? In the preceding pages, the "original cost value of the assets" was found to be \$56,013,500.48, and the estimated present value \$45,841,488.76. But neither amount is the capital which is producing the profit of \$4,949,517. Four of the companies include among their assets stocks and bonds of other companies, accounts and bills receivable, inter-company obligations, deposits, etc., which produce very little income and have little value. These items aggregate some \$22,000,000, which, subtracted from the "original cost value," would give the following:

Companies.	Cost value of plant alone, July 1, 1901.	Estimated market value of plant alone, July 1, 1901.
Chicago City Railway Co.....	\$12,415,604.37	\$9,800,000
Chicago Union Traction Co.....	927,895.00	900,000
North Chicago City Railway Co.....	4,616,909.47	2,300,000

¹In 1897 at the annual meeting of the stockholders Mr. Yerkes suggested the reduction of dividends on the North Chicago Street Railroad capital stock as a matter of policy to one-half the rate of 12 per cent. per annum then paid by the simple expedient of "doubling the stock."

North Chicago Street Railroad Co.....	1,805,388.65	1,400,000
Chicago Passenger Railway Co.....	1,677,411.29	1,300,000
Chicago West Division Railway Co.....	5,783,713.65	4,000,000
West Chicago Street Railroad Co.....	6,383,147.34	4,900,000
Total	<u>\$33,610,069.77</u>	<u>\$24,600,000</u>

Eliminating the small income which these stocks, bonds, etc., produced—\$30,266—from the gross income as given above, the net income is \$4,919,251. This is a profit of 14.6 per cent. upon the original cost value of the plant or of the productive assets, or 20 per cent. upon the estimated present market value of the plant or of the productive assets.

Upon a capitalization of \$33,600,000, it follows that the companies could pay the city 12 per cent. of gross income, lay aside 4 per cent. for depreciation in excess of the ordinary charges for repairs and maintenance, and still pay 6 per cent. dividends. Upon a capitalization of \$24,600,000, which still is probably in excess of the market value of the plant, the companies could pay the city almost 20 per cent. of gross income, lay aside a depreciation fund of 4 per cent. and pay 6 per cent. dividends. Or, upon a capitalization of \$24,600,000, the companies could lower fares to 4 cents and still accumulate a depreciation fund of 4 per cent. a year and pay dividends amounting to 6 per cent. This computation is upon the basis of present traffic, but if fares were lowered to 4 cents, the traffic would increase considerably, and thus enable the companies either to still further lower fares or pay larger dividends.

Present Compensation for Franchises.

Either one of these alternatives could be adopted if the capitalization approximated the market value of the plant, and this also in addition to the following payments made to the city in 1900.¹

Car licenses.....	\$61,440.24
Personal property tax.....	210,955.36
Maintenance of bridges.....	3,000.00
Percentage of receipts.....	1,647.56
Mileage compensation.....	811.67
Extensions of electric light.....	30,000.00
Maintenance of electric lighting.....	10,000.00
	<u>\$317,854.83</u>

¹Real estate taxes are excluded because this property is assessed by the local town assessors and there are no statistics to show what is the total amount. If given, it could not be construed as compensation for franchises, as its value is determined irrespective of franchise rights.

These figures have been furnished by the City Controller's office, to which I am greatly indebted.

In addition the companies are required to pave a portion of the streets, but there is no record of the amount actually expended.

These payments are in a sense compensation for the franchises granted; and if there were no such payments to be made, the market values of the securities would be more than at present. But as they were paid out of gross earnings before market values were fixed, the city evidently receives nothing for \$75,000,000 in franchises now being operated by the street railway companies. In other words, private corporations are using \$75,000,000 of capital for which they pay not one cent of compensation. Evidently some readjustment of conditions is greatly needed.

Let us now examine each of the seven companies somewhat in detail.

History of the Chicago City Railway Co.

Street railways were first operated in Chicago in 1859—about the same time that they were introduced in other cities—and immediately checked the growing business of the omnibus lines. Upon February 14, 1859, a special act of the legislature incorporated two companies, namely, the Chicago City Railway Co. and the North Chicago City Railway Co. The former took over franchises previously granted to private persons, and soon had constructed lines in the south and west divisions of the city. The latter were sold to the West Division Railway Co. in 1863, and since that time the Chicago City Railway Co. has confined its operations to the South Side—that portion of the city south and east of the Chicago River.

Horse traction was almost universal until 1881, only three miles out of the forty-five being operated by steam upon January 1st of that year. Cable power was introduced the year following and in a few years a large proportion of the road had been converted. It is advisable, therefore, to strike a balance at the close of 1880 and ascertain what had been the financial results up to that date.

Upon December 31, 1880, there were 45.679 miles of horse railroad (the figures for mileage are always given in this study in terms of single track—I mile double track being equivalent to 2 miles single track); \$1,319,062.91 had been paid out for "Construc-

tion," namely, roadbed, track and street paving, or \$28,854.89 per mile. Nothing had been credited to this account for depreciation, and this amount represented not only original cost, but changes and reconstruction as well. From the data given in the books of the company, showing the cost of part of the road and of the paving, Mr. Bard has estimated (and his figures seem to be over, rather than under, the actual cost) that the original cost of the roadbed existing on December 31, 1880, was \$772,596.08, or \$16,913.59 per mile. (See Exhibit I, Sec. 1.)

The total assets and liabilities of the company upon that date were (Exhibit I, Sec. 1):

ASSETS.		
Roadbed	\$772,596.08	
Real estate.....	234,423.63	
Buildings	202,472.75	
Personal property.....	473,442.29	
Bills receivable.....	2,606.00	
Cash	3,976.41	\$1,689,517.16

LIABILITIES.		
Capital stock.....	\$1,500,000.00	
Bills and accounts payable.....	152,093.67	
Drivers' deposits.....	16,977.90	1,669,071.57
Surplus December 31, 1880.....		\$20,445.59

According to the books the surplus was \$676,092.43, but no allowance had been made for depreciation, which represents the difference between the two figures.

Since 1881 the conversion to cable and electric traction has continued, until at present only 5 out of the 182 miles owned and operated by the Chicago City Railway Co. are horse road, 35 miles are cable and 142 miles electric. (See Exhibit I, Sec. 8.)

The total cost value of all property existing December 31, 1897, and the outstanding obligations are as follows (See Exhibit I, Sect. 6):

ASSETS.		
Cable road.....	\$2,606,280.24	
Electric road.....	3,142,425.17	
Horse road.....	105,741.43	
Leased road.....	170,000.00	
Illinois Central Railroad construction.....	60,590.92	\$6,085,037.76
Rolling stock.....		1,521,931.60
Real estate.....		1,993,362.50

Machinery	1,208,853.21
Miscellaneous property.....	225,919.30
Stock, bonds, accounts receivable.....	28,768.20
Cash on hand.....	540,688.14
Total	<u>\$11,603,960.71</u>

LIABILITIES.

Capital stock.....	\$12,000,000.00	
Bonds	4,619,500.00	
Accounts payable.....	232,488.22	\$16,851,988.22
DEFICIT		<u>\$5,248,027.51</u>

Since December 31, 1897, only a few changes have been made in the debit and credit sides of the ledger, and the conditions upon July 1, 1901, can be stated with very close approximation. During 1899 and 1900 \$1,500,000 in stock were added to the liabilities, and upon July 1, 1901, \$4,500,000 more were issued, making the total capital stock \$18,000,000. The proceeds of the last issue, together with \$119,500 from the treasury, went to retire the bonds then due. Assuming that the remainder produced by these stock sales—\$1,380,500—was spent in increasing the value of the assets (an assumption perfectly fair to the company), we have for the original cost value of the assets upon July 1, 1901, \$12,984,460.71, and for the liabilities \$18,232,488.22. This would leave an excess of liabilities over assets—a deficit—of \$5,248,027.51.¹

This is the sum which is properly chargeable to depreciation and which should have gradually been written off by the company. If account be taken of depreciation since construction (for the road-bed is not as good as when built and cable traction is going out of use and other systems must be adopted before long), the depreciation would be considerably increased. The original cost of the present assets was nearly \$13,000,000, but they could not be sold for more than \$9,800,000 at the very most, and probably for not more than \$8,500,000. Adopting the maximum figure, the deficit would be over \$8,400,000. In other words, the market value of the assets is sufficient to pay about \$9,800,000 to the stockholders, who nominally should receive \$18,000,000. Of course the franchises are further security, and if they should not be terminated for four

¹Of course the minor items have changed since December 31, 1897, but the reports of the company do not show to what extent, and as they would not affect the figures materially, I have taken them as in 1897.

or five years the profits of the company would be sufficient to pay dollar for dollar, if devoted exclusively to wiping out the deficit—or writing off the depreciation.

The history of the stock and bond issue shows how very remunerative the street railway industry upon the South Side has been. In 1881 the capital stock was \$1,500,000, which has gradually been increased to \$18,000,000. All of this stock, except possibly \$250,000, which was issued as dividends, has been sold to stockholders at par. Without exception, it could have been sold at a premium immediately after issue, which means that a large bonus has been given to the stockholders each time. Including the regular annual dividends of 10 per cent. in 1882 and 12 per cent. each year since, the extra dividends in stock, bonds and cash, and the premiums upon the stock and bond issues, we have total dividends of \$37,602,187.50 paid between January 1, 1882, and January 1, 1898, or an average of 44.63 per cent. per annum for sixteen years. (Exhibit I, Sec. 7.) Since January 1, 1898, \$6,000,000 in stock has been issued at par, \$1,000,000 in July, 1899, \$500,000 in August, 1900, and \$4,500,000 July 1, 1901. The market price of the stock after the first issue was 277, after the second 242, and after the third 209. The bonus upon the 1899 issue was, therefore, \$1,770,000; upon the 1900 issue, \$710,000, and upon the 1901 issue, \$4,905,000. The percentages for the respective years, upon the basis of stock outstanding when sales were made, were 14 3-4, 5 6-13 and 36 1-3 respectively. Adding the regular quarterly dividends for these years—12 per cent. per annum—the total dividends would be 26 3-4 per cent., 17 6-13 per cent. and 48 1-3 per cent., respectively, an average of nearly 31 per cent. for the last three years.

It is to be remembered, however, that the stock contains at least \$8,400,000 of water; the present value of the productive assets—the real capital—being not more than \$9,800,000. The net earnings for 1900 were \$1,888,000, which, upon a capitalization of \$9,800,000, would yield dividends of over 19.2 per cent. Thus, the Chicago City Railway Co. could give the city 20 per cent. of its gross earnings and still pay 8 per cent. dividends upon the actual capital invested. Or, it could pay the city 16 per cent. of gross earnings, lay aside 4 per cent. for depreciation and still pay 6 per cent. dividends. Or, it could reduce fares to 4 cents on the basis of the present traffic

and still pay 8 per cent. dividends upon the actual capital invested. Or, it could sell 6 tickets for 25 cents and lay aside 4 per cent. for depreciation and 6 per cent. for dividends. The increase in traffic which would follow this reduction of fares would probably render a still further reduction possible.

North Side—North Chicago City Railway Co.

The first company to operate a street railroad upon the North Side—the North Chicago City Railway Co.—was incorporated February 14, 1859, as seen above. The great fire of 1871 practically destroyed all of its property, but reconstruction was at once begun, and by May 24, 1886, there were in operation 44.774 miles of track—horse traction; \$2,054,277.65 had been expended for construction, real estate, buildings, rolling stock, etc. Yet the capital stock was only \$500,000. Of the bonds outstanding—\$1,247,000—at least \$750,000 had been issued to stockholders as dividends; and of the remaining \$497,000 a considerable portion had probably been issued in a similar way. Thus, even assuming that the stock had fully been paid in, it is evident that the road had been built principally out of profits. (Exhibit II, Sec. 2.)

The original cost value of the plant upon May 24, 1886, exclusive of the franchise, is shown by the trial balance to be (Exhibit II, Sec. 2):

1. Real estate.....	\$245,188.37
2. Personal property, inventoried at.....	482,739.66
3. Buildings	418,024.84
4. Construction	908,324.78
Total	<u>\$2,054,277.65</u>

Allowing for appreciation and depreciation, the plant was not worth more than \$1,500,000 and perhaps could not have been sold for more than \$1,250,000. The market value of the stock was about \$500 per share and the franchises were worth at least \$2,100,000, and probably nearer \$2,500,000.

Such was the financial condition of the North Chicago City Railway Co. upon May 24, 1886, when an agreement was entered into with the North Chicago Street Railroad Co., which had been incorporated six days previous, and which was controlled by Messrs.

Yerkes, Widener, Elkins and their associates.¹ In brief, this contract provided for the leasing of the property and franchises owned by the North Chicago City Railway Co. for a term of 999 years, in return for which the North Chicago Street Railroad Co. agreed to pay the interest on all bonds and mortgages of the lessor outstanding and to be created, and a quarterly payment of \$37,500. The lessee further agreed to construct a cable road on North Clark street, the *actual* cost of which was to be borne by the lessor, payment being secured by a mortgage bearing interest at 6 per cent. per annum, payable semi-annually. Additional lines and improvements were to be constructed as mutually agreed, to be paid for as above or by bonds secured by a mortgage, at the option of the lessee. A concluding clause provided that when the North Clark Street cable road should be completed, the lessee should pay to the lessor company \$500,000 in cash or in capital stock at the option of the former company—a sum just equivalent to the capital stock of the North Chicago City Railway Co. (Exhibit II, Sec. 1.)

These terms were apparently very favorable to the old company, as the quarterly payments were equivalent to a 30 per cent. annual dividend, payable quarterly, upon the total capital stock. Doubtless the company also considered the \$500,000 bonus as an additional compensation equivalent at least to 6 per cent. annual dividend, and in case the North Chicago Street Railroad Co. should be prosperous, equivalent to a 10 or 12 per cent. annual dividend, or more, making a total of 40 per cent. or more upon the actual capital stock of the old company.

Comparing the cash quarterly payments, the interest on the bonds and the bonus with the probable market value of the plant, one finds the price paid equivalent to at least 16 per cent., and possibly 18 per cent., on the maximum estimate of \$1,500,000, or 18½ per cent., and possibly 21 per cent., upon \$1,250,000. This was a very liberal sum, but probably not more than the value of the franchises warranted.

One wonders at first glance why the old company should desire to lease its property even upon such favorable terms when it was

¹Care must be taken to distinguish between the North Chicago City Railway Co. (N. C. C. R. Co.) and the lessee company, the North Chicago Street Railroad Company (N. C. S. R. Co.).

in such good financial condition, and why the new company should be willing to pay such a high price for the properties even though it were not more than the market would warrant. The preamble to the agreement furnishes only a partial explanation. It states that the old company considered a change in the motive power wise and necessary. But apparently it did not have the courage to make the experiment. This the new company was willing to do, and upon terms that appeared to be very favorable to the old company. The operations of the lessee under the agreement will show how it evaded the strict letter of the contract and how it burdened the minority stockholders with a very large debt. Possibly the North Chicago Street Railroad Co. had prearranged this course of action.

On May 24, 1886 (the date of the agreement between the two companies), the lessee—the North Chicago Street Railroad Co.—made a contract with the United States Construction Co. to build the North Clark street cable line. Under this agreement, which was very loosely drawn, and other agreements made in 1886 and 1887, the United States Construction Co. completed work for which it received \$4,500,000 in capital stock in the new road, \$998,000 in 4½ per cent. bonds of the old company and \$710,908.39 in cash from the new road, a total of \$6,208,908.39. The cost to the Construction Company, according to the very liberal estimates of Mr. Bard, could not have exceeded \$3,141,741.32. (Exhibit II, Secs. 4 and 5.)

Thus, if the securities were selling at par there would be a profit to the United States Construction Co. of \$3,067,167.07. But the amount is still larger, for almost immediately the stock went to a premium, and since 1892 has been worth over \$200 per share.

This large profit was charged against the North Chicago City Railway Co. in apparent violation of the contract which required the North Chicago Street Railroad Co. to keep an exact account of the cost and to debit the lessor that amount only. It may be claimed that the cost was \$6,200,000, as that was the sum paid the United States Construction Co. by the lessee. But the contract was merely a subterfuge, as the United States Construction Co. originally owned 49,990 of the 50,000 shares of the capital stock first issued, and the same men controlled both companies. (Exhibit III, Sec. 3.)

The improvements paid for by the North Chicago Street Railroad Co., without the intermediation of the Construction Company, amounted to \$1,634,421.54, to which should be added \$79,001.96 of floating debt assumed by the lessee, making the total expenditures of the lessee for the account of the lessor \$7,922,331.89. The lessor company has paid \$1,750,000 in bonds, leaving a balance still due the lessee on December 31, 1897, of \$6,172,331.89. (Exhibit II, Sec. 5.)

The original cost value of the assets existing December 31, 1897, were as follows:

73.329 miles single track road.....	\$3,184,280.14
Real estate.....	245,188.37
Buildings	1,187,440.06
Personal property, per inventory.....	489,489.66
Total	\$5,106,399.13

The outstanding liabilities upon the same date were:

Capital Stock.....	\$500,000.00
First mortgage 6 per cent. bonds.....	500,000.00
Consolidated 4½ per cent. mortgage bonds.....	2,497,000.00
Due N. Chi. St. R. R. Co. for expenditures for betterments.....	6,172,331.89
Total	\$9,669,331.89

showing an excess of \$4,562,932.76 over the original cost value of existing plant. But as the cost value is only \$2,109,399.13 in excess of the outstanding bonds, which are a first lien upon the property, there remain \$4,062,932.76 of the claim of the lessee and nothing but the franchise to secure it and the claims of the stockholders. (Exhibit II, Sec. 8.)

Indeed, the company is in a much worse condition than these figures indicate, for in taking the cost value of the assets at \$5,106,399.13, no allowance was made for depreciation, which would be a very considerable sum on every item except the real estate. It is very much doubted whether the market value of the assets, exclusive of the franchise, is sufficient to liquidate the outstanding bonds.

North Side—North Chicago Street R. R. Co.

The financial condition of the North Chicago Street Railroad Co. is considerably better than that of the road just treated. Between May 24, 1886, and December 31, 1897, it had expended on its own account \$6,874,589.08, of which \$4,255,388.35 represent invest-

ments in stocks and bonds of other companies, accounts and bills receivable and other assets which are not used directly in the operation of the road, leaving a total expenditure for *plant* of \$2,619,200.73. (Exhibit III, Sec. 4.) The cost value of the *plant* as it existed on December 31, 1897 (excluding again the stocks, bonds, etc.), was \$1,805,388.65, showing a depreciation of \$813,812.08. (Exhibit II, Sec. 5.)

The original cost of all the property as it existed December 31, 1897, was \$6,060,777, to which should be added \$2,109,399.13—the excess of the estimated original cost of the North Chicago City Railway Co. properties over outstanding obligations, which the North Chicago Street Railroad Co. might claim as a part payment of the amount due it, making the total assets \$8,170,176.13. (Exhibit III, Sec. 5.) There are outstanding liabilities amounting to \$7,407,597.08, leaving \$762,581.05. This book value and the value of the franchise constitute the security of the \$6,600,000 of capital stock. Here again no allowance has been made for depreciation upon existing plant, which would be considerable, and if allowed for, would cause liabilities to exceed assets considerably. (Exhibit III, Sec. 6.)

Notwithstanding the lack of real property as security, the stocks of the two companies have always been valuable. From 1886 to December 31, 1892, the company paid dividends, including stock dividends and bonuses as well as regular dividends, averaging 6.86 per cent. upon the capital stock. From 1893 to 1897 they averaged 25.24 per cent. per year. The total amount of extra dividends in the shape of stocks and bonds amounted to \$3,548,000, the regular dividends to \$5,764,253.50, a total of \$9,312,253.50. To this amount should be added 30 per cent. on the \$249,900, the outstanding stock of the North Chicago City Railway Co., or a total, up to December 31, 1897, of \$822,670. The aggregate profit of the stockholders of both companies was, therefore, \$10,134,923.50 from May 24, 1886, to December 31, 1897—not a very bad showing for roads whose property, exclusive of franchise rights, would not sell for a sufficient amount to meet outstanding obligations. (Exhibit III, Sec. 7.)

Since 1897 no changes have been made in the assets and liabili-

ties of the North Side lines. In 1899 they were leased to the Chicago Union Traction Co., but this will be treated of later.

To complete the history of the North Side roads it only remains to show the relations of the North Chicago City Railway Co., the North Chicago Street Railroad Co. and the United States Construction Co. A majority of the stock of the first company (2,501 shares) was purchased by the North Chicago Street Railroad Co. in 1886. This company in turn was controlled by the United States Construction Co., which would not produce its books for examination; but if current report and financial papers are to be believed, the Construction Company was controlled by Messrs. Yerkes, Widener, Elkins and their associates. Thus, as far as the majority interest of the lessor is concerned, any financial deal between the two companies would simply be taking money from one pocket and putting it in another. But not so as to the minority interest—the stockholders who did not also hold stock in the United States Construction Co.; they would be burdened with a heavy debt, and such was possibly the purpose of the lessee or its backer, the United States Construction Co. The agreement of May 24, 1886, was plain, but as the Construction Company virtually controlled the majority of stock in the company being manipulated, it would have been difficult, even if the minority stockholders desired, to know what was going on and to remedy it. Indeed, the issuing of the stock of the lessee before the United States Construction Co. had a title to it in order that the latter company might speculate in it before it was paid for, is characteristic of the way in which the North Side companies have been manipulated in the interest of a few individuals.

West Side—Chicago Passenger Railway Co.

The first street railway built upon the West Side was constructed by the Chicago City Railway Co., which transferred its lines to the Chicago West Division Railway Co. in 1863. But the present relations of the various companies can most easily be understood if one begins with the fourth company organized, viz., the Chicago Passenger Railway Co. This company was incorporated February 12, 1883, and in 1888, when an agreement was made with the West Chicago Street Railroad Co., it owned 29.79 miles of horse railroad. Its capital stock was \$1,000,000 (10,000 shares) and the

outstanding bonds amounted to \$400,000. (Exhibit IV, Sec. 1.)

The first agreement between the Chicago Passenger Railway Co. and the West Chicago Street Railroad Co., under date of November 16, 1888, stipulated, among other things, that the former should convert the horse road into a cable line for certain specified distances upon Desplaines, Washington and Franklin streets. The two companies were to use this line jointly, and as a consideration the lessee was to pay the entire cost of construction and 5 per cent. per annum of the amount which should be paid by the Chicago Passenger Railway Co. in rebuilding and repaving the Washington street tunnel. The same company was also to provide for the traction of the cars of the Chicago Passenger Railway Co. through the tunnel and around the loop into the central portion of the city; the amount charged therefor to be a reasonable sum as later agreed upon. The duration of the contract was fifty years. (Exhibit IV, Sec. 1.)

This agreement was not satisfactory and upon March 15, 1889, just four months later, it was so amended as to require the lessor to issue 6 per cent. bonds to fund its floating indebtedness, to pay for improvements contracted for (probably referring to the obligations incurred under the preceding agreement), and to pay for any construction work under the present agreement, except the cable road provided for above. All of these bonds were to be guaranteed by the lessee, which thereafter was to receive the gross receipts and to pay all operating expenses. As remuneration, this company was to pay the lessor \$25,000 semi-annually, being 5 per cent. per annum on the outstanding stock. The other provisions were so modified as to release the Chicago Passenger Railway Co. from paying for traction of its cars and the West Chicago Street Railroad Co. from paying the 5 per cent. rental. Upon April 12, 1897, the lease was extended, making the full term sixty-five years, expiring March 14, 1954. (Exhibit IV, Sec. 1.)

The similarity between this operating agreement and the one made in 1886 between the North Side companies suggests that both were conceived by the same brain. Such, indeed, was the fact, for the West Chicago Street Railroad Co. was dominated by the same men who controlled the United States Construction Co. and the North Chicago Street Railroad Co. A further similarity is to be

seen in the fact that a majority of the stock of the lessor was owned by the lessee at the time the agreements of 1888 and 1889 were consummated. Thus the minority stockholders were the ones principally affected, as in the case of the North Side company.

The operations under these agreements cannot be definitely stated, as the books of the company are inaccessible. But the following estimates are sufficiently accurate for all practical purposes. Since 1889 4.4 miles of horse railroad have been constructed at a cost of \$104,737.66, making the original cost of the 34.19 miles of horse railroad \$814,504.67. Upon December 31, 1897, there remained 2.38 miles, which cost \$56,705.12, leaving \$757,799.55 to represent depreciation due to conversion of the road into cable and electric traction. (Exhibit V, Sec. 4.)

The original cost value of the assets existing December 31, 1897, was as follows (Exhibit IV, Sec. 4):

2.836 miles single track cable.....	\$273,547.60
0.314 miles single track cable.....	43,715.51
2.38 miles single track horse railroad.....	56,705.12
28.95 miles single track electric railroad.....	542,240.07
Real estate and buildings.....	761,202.99
Total	\$1,677,411.29

The outstanding liabilities upon the same date were (Exhibit IV, Sec. 5):

First mortgage 6 per cent. bonds.....	\$400,000.00
Consolidated 5 per cent. bonds.....	1,334,000.00
Capital stock.....	1,340,300.00
Due W. Chi. St. R. R. Co.....	49,158.49
Total	\$3,123,458.49

Upon the face of these figures liabilities exceed assets to the extent of \$1,446,047.20. It is quite likely that a re-appraisal of the real estate would reduce this deficit considerably, perhaps to \$500,000. (Exhibit IV, Sec. 5.) But as no allowance has been made for depreciation, the original cost value being given above, the present value of all assets does not exceed \$1,300,000, allowing for appreciation of real estate, and probably is less.

West Side—West Division Railway Co.

Returning now to the West Division Railway Co., the books show that it was incorporated February 21, 1861. About 1863 it purchased the West Side lines of the Chicago City Railway Co.

and their extensions to the business center of the city, paying about \$200,000, according to current report. Upon October 20, 1887, the date of the agreement with the West Chicago Street Railroad Co., the West Division Railway Co. owned 98.45 miles of horse road. The construction cost was \$1,935,131.52, or \$19,655.98 per mile. This comparatively low figure was due principally to the practice of paying for extensions and betterments out of surplus earnings, and to the small amount of paving and poor character. Only 14 out of a total of 98.45 miles of track were paved, and those mostly with cheap macadam. Upon October 20, 1887, the original cost of all assets, including 7,300 shares of Chicago Passenger Railway Co. capital stock, was \$5,468,071.17. The total outstanding liabilities amounted to \$4,816,511.06, showing a surplus of \$651,560.11. (Exhibit V, Sec. 2.)

Computing the value of the securities at market rates, the value of the physical property at \$3,700,000 and the miscellaneous accounts at their face value, one finds that the franchise was worth at least \$5,800,000, and possibly over \$6,000,000.¹

The West Chicago Street Railroad Co. was incorporated July 19, 1887, and upon the following November 11, when a lease of the Chicago West Division Railway was proposed and approved, 99,497 of the 100,000 shares of stock were voted by C. T. Yerkes. At that time Messrs. Widener, Elkins and Kemble apparently owned 6,251 of 12,500 shares of stock of the Chicago West Division Railway Co., one share more than one-half of the entire number. Thus the lease was virtually made by Mr. Yerkes upon one side and Messrs. Widener, Elkins and Kemble upon the other, although nominally the lessee was the Chicago West Division Railway Co. (Exhibit VI, Sec. 1.)

The language of the agreement was somewhat vague and involved, but in the light of subsequent operations, its provisions are quite clear. In substance it dealt with three matters: (1) The

¹It is difficult to select the proper price at which to estimate the stock. During 1886 the quotations ranged about \$400 per share bid and \$425 asked. In May, 1887, they had risen to \$475 bid and \$600 asked. The net earnings for ten months preceding the signing of the agreement were at the rate of 35 per cent. per annum upon the capital stock, which would give a market value of \$700 per share upon a 5 per cent. basis, or \$650 conservatively estimated. The above franchise value has been computed upon a \$475 basis; but, assuming that the stock would bring \$650 per share, the franchises would be worth \$8,000,000 instead of \$5,800,000. (See Exhibit VI., Section 6.)

construction of a cable road; (2) the lease of the entire property of the Chicago West Division Railway Co. to the West Chicago Street Railroad Co.; (3) the transfer of the 6,251 shares owned by Messrs. Widener, Elkins and Kemble. As to the first, it was stipulated that the lessee should build not less than 17 miles of cable road, and for the purpose of an accounting, should keep an accurate account of the cost of all permanent improvements. As regards the second, the franchises and property of lessee, including the 7,300 shares of the Chicago Passenger Railway Co., were to be leased to the West Chicago Street Railroad Co. for 999 years, in return for which the lessee was to pay the lessor company 35 per cent. per annum upon the capital stock, or \$109,375 quarterly,¹ and assume the outstanding bonded debt of the old company, amounting in all to \$4,070,000.² As compensation for the transference of the 6,251 shares of stock and the negotiation of the lease, Messrs. Elkins, Widener and Kemble were to receive \$4,100,000 in 5 per cent. 40-year bonds of the lessor and \$6,000,000 in cash or capital stock at the option of the lessee. (Exhibit VI, Secs. 1-5.)

Upon its face, the agreement seems to be very fair to all parties concerned, except possibly the lessee. Messrs. Elkins, Widener and Kemble certainly had no cause for complaint, as they received \$10,100,000 in securities, worth more than par, for negotiating the lease and for 6,251 shares of stock which could not have cost them more than \$4,375,700 (\$700 per share), and probably considerably less, even if they did not secure an option, which they could have done early in 1887 at very little expense. Five million dollars for negotiating the lease is a very remunerative compensation, and it is not easily explicable why Mr. Yerkes should have agreed to such an enormous and apparently uncalled for expense, unless he expected to recoup his losses by subsequent operations, or had an exaggerated idea of the value of the West Side properties, and could not secure control without accepting these rather hard terms. Probably there is some truth in each of these suppositions,

¹This would be equivalent to an annual payment of 17 per cent. upon the maximum estimated value of the plant, exclusive of the franchise.

²One may wonder at the apparent inconsistency between amount of the bonded debt given here and upon page above. The additional amount here given—\$1,052,000—was issued during the transference of the property in order to fund floating debt and settle accounts.

but \$10,100,000 for stocks having a face value of \$625,100 is an enormously high price; \$1,615 for a share of stock whose face value is \$100, and worth in the market not more than \$700, is an unusual offer, and most men would sell at a much smaller profit. And when a majority of the stock had been secured in the open market, any sort of a contract could have been made between the two companies, for Mr. Yerkes would then control both companies. However, Mr. Yerkes probably depended upon subsequent operations to offset the large sum paid by his company, and we shall see that he did not miscalculate.

The lessor certainly received all its properties were worth. Its bonds were all guaranteed, and later obligations of the lessee were substituted for them relieving it of all liability in this direction. Thus the stockholders were to receive 35 per cent. dividends clear. This was their full market value and indeed somewhat more, if we take into consideration the fact that most of the franchises expire in 1903 and 1905, and practically all of them, if the 99-year act of 1865 should not be upheld by the courts.

The only offset is the cable road which the agreement provided for and seemed to stipulate should be paid for by the lessor at cost. But the agreement was never fully carried out, the amount charged was excessive and although the bonds are guaranteed and the interest paid by the lessee, a debt has been incurred which was much larger than anticipated and which must be settled when the agreement is terminated. This was one way in which Mr. Yerkes expected to get even, for he was a stockholder in the United States Construction Co., which did the work and received the unusually high price. This agreement will be given further on, when the operations of the lessee are fully treated.

The books of the West Chicago Street Railroad Co. contain no detailed account of the 17 miles of cable road to be constructed. They merely show that on November 17, 1887, a contract with the United States Construction Co. was authorized for a road upon certain streets, for which \$4,000,000 in cash or stock, at the option of the railroad company, was to be paid. Under this contract 17.47 miles were built, but just how much of it was chargeable to the lessor it is impossible to say. (Exhibit VI, Sec. 2.)

The financial condition of the company upon December 31, 1897, is shown by the following summaries. Of the original road and the extensions there existed upon that date (Exhibit V, Sec. 5):

6.26 miles single track horse road.....	\$123,046.43
68.68 miles single track electric.....	825,163.04
68.68 miles paving, relaid.....	411,495.93
11.655 miles single track cable road (actual).....	1,124,188.06
321 miles single track cable road (actual).....	44,690.05
13.404 miles single track cable road (estimated),.....	1,292,888.56
Real estate on Oct. 20, 1887.....	449,158.73
Buildings on Oct. 20, 1887.....	927,984.00
Western Ave. power house.....	520,455.65
Halsted St. car house alterations.....	11,803.70
New building, Clybourn place.....	52,839.50
Total	\$5,783,713.65

The outstanding liabilities were as follows:

Capital stock.....	\$1,250,000.00
First mortgage bonds.....	4,070,000.00
Due West Chi. St. R. R. Co.....	4,869,998.38
Total	\$10,189,998.38

showing a deficit of \$4,406,284.73, \$1,858,738.60 of which was due to the substitution of cable and electric traction for the old horse railroad, and the remainder—\$2,547,501.13—represents the loss by the transfer of the operating plant to the lessee and the amount, which the United States Construction Co. overcharged the lessee for construction work and which overcharge this company debited to the account of lessor, contrary to the agreement of 1887.

The actual deficit is much larger than that shown by the books. The present worth of the plant is not more than \$4,000,000. This would swell the deficit to \$6,200,000. In other words, the physical property would about wipe out the bonds, and the stockholders would have nothing but the agreement with the lessee to fall back upon. As long as this remains unimpaired they have no fault to find, for their 35 per cent. dividends are being declared regularly. But in case the contract should be terminated for any reason, they would be face to face with a large debt, nearly \$5,000,000, and only a few franchises with which to pay it. If most of these should be terminated in 1903 and 1905, little could be realized from this source, certainly not enough to pay the debts and reimburse the stockholders.

West Side—West Chicago Street R. R. Co.

The West Chicago Street Railroad Co. was incorporated July 19, 1887, and almost immediately leased the franchises and property belonging to the two existing lines upon the West Side, as stated in the preceding pages. Its capital stock was \$10,000,000, of which \$9,949,700 was voted upon by Mr. Yerkes as late as November 11, 1887. (Exhibit VI, Sec. 3.)

Among the first operations of the company, after the lease of 1887 with the Chicago West Division Railway Co. had been approved, was the making of a contract with the United States Construction Co., controlled by Messrs. Yerkes, Elkins, Widener and their associates, for a cable line, which is set forth above. The methods by which the debt of \$4,000,000 was paid become important at this point, as they reveal the way in which the capital stock was finally issued.

According to the books, \$4,000,000 in cash was paid to the United States Construction Co., which deposited \$4,000,000 in capital stock of the railroad company with Mr. George E. Newlin as trustee, with the understanding that it should be paid back as the work was completed. The last payment of stock was made October 22, 1890. Other entries state that the United States Construction Co. subscribed for \$4,000,000 in capital stock of the West Chicago Street Railroad Co. and paid for it in cash. This was undoubtedly a mere subterfuge. Four million dollars in capital stock was paid for the cable road, and not in cash, as represented. Mr. Bard has gone fully into this, and his reasons for accepting this conclusion and disbelieving the book entries are given in Exhibit VI, Sections 2 and 3.

The remaining \$6,000,000 of the stock was issued in the following way: According to the contract with the Chicago West Division Railway Co., \$6,000,000 in cash or stock was to be paid Messrs. Widener, Elkins and Kemble for negotiating the lease. The books state, also, that these three persons subscribed for \$6,000,000 capital stock of the new company, and paid for it in cash. The money was immediately repaid to them, \$5,000,000 on account of the lease and \$1,000,000 in advance as part payment for the 6,251 shares of the Chicago West Division Railway Co. stock. For some time a special account, "Leasehold," stood upon

the pages of the ledger with a debit balance of \$5,000,000. Later, \$4,000,000 was transferred from general "Construction" account and a new account opened with a debit of \$9,000,000, and it still existed December 31, 1897. Of this sum not more than \$4,000,000 of stock was actually issued for cash or property, and the payment of \$4,000,000 for 17.47 miles of cable road is an unusually high price. Some allowance might be made, if the stock were at a discount or seemed likely to sell below par when issued. But there is slight probability that this factor had much influence. The very first Stock Exchange quotations, those of June 14, 1889, were above par. And, indeed, most of the stock, and possibly all of it, was issued before the 6,251 shares were delivered or the cable road constructed; so that the persons holding it could have sounded the market before obligations to any considerable amount had been assumed by them. (Exhibit VI, Sec. 4.)

How shall we class the \$1,000,000 which the books state were given in part payment for the stock to be transferred? Is it "water" or a legitimate capital expenditure? This raises the question, How much was paid for the 6,251 shares of the stock, \$4,100,000 in bonds or \$4,100,000 in bonds and \$1,000,000 in stock? According to the earning power of the Chicago West Division Railway Co. for ten months preceding the leasing of the road, the dividends would be 35 per cent. per annum. The stock would, therefore, have a market value of about \$700 per share. Six thousand two hundred and fifty-one shares would represent a market value of \$4,375,700. If \$5,100,000 were paid at the rate of \$815.86 per share, the company would have paid more than the market value, which seems very unlikely. Again, the Stock Exchange quotations seem to indicate that the average value of the stock at the time the negotiations were closed, about June, 1887, was about \$650 per share. This would give a total value to 6,251 shares of about \$4,100,000. Further, the plans of financing the North and the West Side roads were similar in every other respect, which would strongly lead one to believe that the similarity continued throughout. Messrs. Elkins, Widener and Kemble could well afford to transfer the stock without making a profit upon the transaction at once, when they received \$6,000,000 of stock for negotiating the lease. But very likely they made a profit on the

stock transaction, which would lessen still more the probability of \$1,000,000 in stock being part payment for the 6,251 shares. Thus, one is forced to the conclusion that at least \$6,000,000 out of the \$10,000,000 original capital stock was "water," and if one goes back of the contract with the United States Construction Co., which is probably an excuse for violating the agreement between the Chicago West Division Railway Co. and the West Chicago Street Railroad Co., about \$8,000,000 is "water." (Exhibit VI, Secs. 6 and 7.)

From the date of organization to December 31, 1897, the West Chicago Street Railroad Co. expended \$29,615,628.13. The cost value of the property existing upon the latter date was \$16,317,139.34, leaving a depreciation of \$13,298,488.79.

	Total expenditures.	Cost value assets, Dec. 31, 1897.	Depreciation.
Chicago Passenger Railway.....	\$1,156,749.52	\$859,503.18	\$297,246.34
Chicago West Div. Railway.....	14,969,998.38	3,872,028.56	11,097,969.82
West Chicago Street Railroad...	13,488,880.23	11,585,607.60	1,903,272.63
Total	\$29,615,628.13	\$16,317,139.34	\$13,298,488.79

Analyzing the depreciation of the companies, one finds that of the \$297,246.34 belonging to the Chicago Passenger Railway Co., \$104,737.66 was due to the removal of 4.396 miles of *new* horse road and the construction of a trolley road in its place. The remainder, \$192,508.68, is the difference between the contract price and the estimated cost of 2.836 miles of cable road built by the United States Construction Co. (Exhibit VI, Sec. 8.)

Perhaps a few words justifying this procedure will not be out of place here, as the plan has generally been followed of estimating the actual cost when the amount charged by the United States Construction Co. has seemed to be exorbitant in comparison with other lines built by other companies. The United States Construction Co. was controlled by Messrs. Elkins, Widener, Yerkes and their associates. These same parties, either directly through the United States Construction Co., which often held stock in the companies with which it made contracts, or indirectly by owning stock in these companies personally, controlled a majority of the stock of the railroad companies. This enabled them to make any sort of an agreement. To assume that a contract made under such conditions would necessarily be fair to all parties and repre-

sent what would be agreed upon by two entirely disconnected parties, requires too implicit confidence in human nature. Thus, when we find that the price agreed upon is very much more than the cost of similar work done by other companies, even allowing for fair contractor's profits, it is doing no injustice and, indeed, it is necessary, if one is to get at the worth of the plant, to estimate the original cost of the present plant at what other companies would have performed the service. This is what Mr. Bard has done, and in accepting his figures, I approve his methods.

The depreciation set opposite the Chicago West Division Railway Co.—\$11,097,969.82—is distributed among the following items: Difference between contract price and estimated cost of the 13.404 miles of cable road built by the United States Construction Co., \$915,067.26; 1.96 miles of horse road converted into trolley road, \$46,698.51; miscellaneous expenditures, \$36,204.05; price paid for negotiating lease, \$5,000,000; cost of 6,251 shares of Chicago Passenger Railway Co. stock, which have no physical property as security, \$5,100,000; total, \$11,097,969.

The depreciation of the West Chicago Street Railroad Co. amounted to \$1,903,272.63, apportioned as follows: The difference in contract price and estimated cost of the 1.23 miles of single track cable road built by the United States Construction Co., \$85,069.91; 50.32 miles single track horse road converted into trolley road, original cost \$1,132,178.36, deduct for street pavement relaid \$261,781.75—\$870,396.61; depreciation in equipment, \$286,192.11; miscellaneous items charged to construction account, \$661,614; total, \$1,903,272.63.

Including the property transferred under the agreements between the companies, the final settlement as to the 6,251 shares of stock in the Chicago Passenger Railway Co. and the cash on hand December 31, 1897, the above summary would be changed to read (Exhibit VI, Sec. 9):

	Book value assets.	Cost value.	Appreciation.
Chicago Passenger Railway...	\$49,158.49	\$1,677,411.29	\$1,628,252.80
Chicago West Div. Railway....	4,869,998.38	5,783,713.65	913,715.27
			Depreciation.
West Chicago Street Railroad.	24,158,908.70	11,585,607.60	12,573,301.10
Total	\$29,078,065.57	\$19,046,732.54	\$10,031,333.03

The cost value of the assets of the two lessor companies are apparently in excess of the book value, according to the last summary, but this is because the first column shows the liabilities of these companies to the West Chicago Street Railroad Co. only, whereas, if the remaining liabilities are considered, the result would be as follows (Exhibit VI, Sec. 9):

	Total liabilities.	Cost value properties.	Deficit.
Chicago Passenger R'way Co..	\$3,123,458.49	\$1,677,411.29	\$1,446,047.20
Chicago West Div. Railway...	10,189,998.38	5,783,713.65	4,406,284.73
West Chicago Street Railroad.	28,358,252.67	11,585,607.60	16,772,645.07
Totals	\$41,671,709.54	\$19,046,732.54	\$22,624,977.00

When the outstanding liabilities are analyzed still further, one finds that in each case the cost of the property is less than the bonds and floating debt, as shown by the following:

	Bonds and Floating debt.	Cost value of property.	Deficit.
Chicago Passenger R'way Co..	\$1,783,158.49	\$1,677,411.29	\$105,747.20
Chicago West Div. Railway...	8,939,998.38	5,783,713.65	3,156,284.73
West Chicago Street Railroad.	15,169,252.67	13,299,321.25 ¹	1,869,931.42
Totals	\$25,892,409.54	\$20,760,446.19	\$5,131,963.35

Adding the bonds outstanding, the total deficit would be:

	Total deficit.
Chicago Passenger Railway Co.....	\$1,446,047.20
Chicago West Division Railway.....	4,406,284.73
West Chicago Street Railroad.....	15,058,931.42
Total	\$20,911,263.35

As a matter of fact, the companies are in a still worse condition than this. The status of the first two companies has been given above. The West Chicago Street Railroad Co. alone remains to be dealt with. According to the above tables, this company has assets, the cost of which was \$11,585,607.50. But, as every one knows, the *present* market value of the plant is considerably less than the original cost. The depreciation is certainly not less than \$1,500,000 and probably more. In other words, the plant, securities and accounts receivable would perhaps wipe out the bonds

¹The cost value of property in this table is \$1,713,713.65 more than in the preceding tables, which is due to this fact: The cost value of the C. W. D. R. is \$5,783,713.65, or \$1,713,713.65 more than the bonds outstanding, to pay which the property has been mortgaged. Thus this amount should be transferred to the credit of W. C. S. R. R. Co., whose claim it would be used to liquidate, making its assets \$13,299,321.25, instead of \$11,585,607.60.

and miscellaneous indebtedness, leaving the stock and the certificates of indebtedness to be reimbursed, if at all, out of the franchise rights, which are far from being ample security in case the franchises should be terminated by the action of the courts, the city council or the legislature.

Chicago Union Traction Co.

Since the date at which Mr. Bard's investigation ends, December 31, 1897, there have been several operations of considerable importance. Another company has been formed and new leases made between it and the North Chicago Street Railroad Co., and the West Chicago Street Railroad Co., thus bringing under one management all the important lines upon the North and West sides of the city. It also controls, through an operating agreement, the Chicago Consolidated Traction Co., which has a large number of suburban lines.

This company was the Chicago Union Traction Co., organized May 24, 1899, and composed of New York, Philadelphia and Chicago capitalists. Its first act was to purchase Mr. Yerkes' holdings in the two companies, amounting to 32,000 shares of stock of the West Chicago Street Railroad Co. out of a total of 131,890, and 20,000 shares of the North Chicago Street Railroad Co. of a total of 79,200 outstanding. It also leased, June 1, 1899, from these two companies all their property and franchises, including the stocks in other companies which they had acquired in 1886, 1887, 1888 and subsequent years. Thus the new company controls the North Chicago City Railway Co., the Chicago Passenger Railway Co. and the Chicago West Division Railway Co., as it owns a majority of the stock, although it does not own a major portion of the stock of the North Chicago Street Railroad Co. and the West Chicago Street Railroad Co.

In return the Chicago Union Traction Co. agreed to assume all the obligations of the lessor companies, to guarantee their bonds, to pay all sums called for by the preceding agreements between the companies, to pay the North Chicago Street Railroad Co. \$237,600 each quarter—equivalent to a 12 per cent. annual dividend upon the capital stock of the company—and to pay the West Chicago Street Railroad Co. \$197,835 per quarter—equivalent to 6 per cent. a year upon the capital stock—these being the rates of dividends

which the companies were paying at that time. To secure the lessor companies, \$10,000,000 in cash or securities were to be deposited with the Illinois Trust and Savings Bank as trustee, and \$3,200,000 in stock of the West Chicago Street Railroad Co. and \$2,000,000 in stock of the North Chicago Street Railroad Co. have been deposited. The market value of these securities was about \$7,200,000 upon July 1, 1901.

The operating agreement with the Chicago Consolidated Traction Co. concerns us little, as the lines operated by this company have not been examined.

The outstanding capital stock of the company is \$12,000,000 preferred, 5 per cent. cumulative, and \$20,000,000 common. It has issued no bonds, but under the agreement guarantees the bonds of the lessor companies amounting to \$25,770,000 for the North Side and West Side companies and \$6,750,000 for the Chicago Consolidated Traction Co., total \$32,527,000.

The original cost value of the assets July 1, 1900, were:¹

ASSETS.	
Construction	\$116,688
Reconstruction	216,026
Real estate	158,922
Equipment	268,760
Stocks and bonds	382,344
Coupon deposits	143,470
Miscellaneous	538,947
Accounts receivable	257,941
Cash	130,034
	<hr/>
	\$2,213,132
LIABILITIES.	
Capital stock	\$32,000,000
Bills and accounts payable	931,954
Employees' deposits	61,588
Coupons	164,170
Accrued liabilities	1,032,637
Miscellaneous	42,816
	<hr/>
	\$34,233,165

There was in 1900, therefore, a deficit of \$32,020,033. That is, by the formation of the new company, \$32,000,000 have been added to the capitalization of the street railroad companies above

¹The last report of the company does not contain a statement of assets and liabilities, so it has been necessary to adopt the statement given in the *Investors' Manual*, which is the company's report for year ending June 30, 1900.

any increase in the physical property. It is true, the company owned stocks in various companies amounting to a par value of \$6,805,200, or a market value of \$13,493,750. But as these companies do not have assets (exclusive of the franchises) of sufficient value to meet their outstanding obligations, it is quite correct to exclude them from the assets and to say there is a deficit of \$32,000,000. In other words, the assets equal the liabilities, excluding the capital stock, leaving as security for the stockholders only the franchises which the company has leased from the other companies. And yet the company paid the lessor companies, as per agreement, and made a profit for its own stockholders of 3 3-4 per cent. during 1899-1900. But after July, 1900, no dividends were paid until July 1, 1901, which seems to indicate that the franchises have been overcapitalized, and that the limit had been reached in the attempt to so water the capital stock and bonds as to bring the rate of profit down to the market rate—5 or 6 per cent. However, the increasing value of the franchises caused by increasing population will doubtless enable the company soon to pay a fair dividend. The overcapitalization of the franchise is only temporary.

Coming now to the question as to what the companies could do if the water were squeezed out of their capitalization and the liabilities were equal to the market value of their properties, we find that the Chicago Union Traction Co. made net earnings during 1900-1901 of \$3,031,073, not including dividends on stocks owned or leased, interests on deposits and premiums. Upon a capitalization of \$14,800,000—the estimated present market value of the operating plant and equipment—this would yield a dividend of over 20 per cent. annually. The company could pay the city over 25 per cent. of the gross earnings and still declare 8 per cent. dividends annually. Or, it could pay the city over 21 per cent. of gross earnings, lay aside a depreciation fund of 4 per cent. annually and pay 6 per cent. dividends. Or, it could reduce fares to 4 cents, upon the basis of present traffic, lay aside a sinking fund of 4 per cent. annually, and divide profits amounting to 6 per cent. Or, it could sell seven tickets for 25 cents and pay 8 per cent. dividends. In each case the increase in traffic resulting from a lowering of fares would make still further reductions possible.

Conclusion.

Although the financial operations of these seven companies have been outlined but briefly, their results are quite evident.

The franchises given away by State Legislature and City Council were at first only fairly remunerative, but with the growth of the city, the rapidly increasing density of population, they became more and more valuable. The temptation to capitalize them was too strong, and when conversion to cable and electric traction became necessary the opportunity was found by which to accomplish this end. It did not originate then, for by failing to write off capitalization as the plant depreciated, the same result was being attained before. But this method did not water the stock and bonds fast enough. In the eighties and nineties new hands took hold and by shrewd manipulations soon capitalized the franchises for all they were worth. But by 1899 the franchises had again outstripped depreciation, and recourse was had to new leases and a new company.

The final result is that of the present outstanding liabilities, amounting nearly to \$118,000,000, at least \$72,000,000 is "water," and if one were to wipe out the assets which produce practically no income and are of little value, this amount would approach \$90,000,000. Of the total liabilities, \$74,200,000 represents capital stock and \$43,800,000 bonds and miscellaneous obligations. Thus all of the stock and part of the bonds are "water."

The franchise values for which the companies pay the city nothing amount nearly to \$75,000,000—a sum almost equal to the watered capital—which shows how closely the companies have estimated the capital to be issued upon the franchises.

It is not surprising, therefore, to learn that the companies have been paying large dividends, even upon watered capital. For example, the Chicago City Railway Co. has paid upon an average over 42 per cent. annual dividends for the last nineteen years. The North Chicago City Railway Co. has paid 30 per cent. since 1886; the North Chicago Street Railroad Co. nearly 15 per cent. for fourteen years.

Some claim might in justice be made for large dividends in recent years, or an excuse offered for an excess of liabilities over assets, if the roads had been constructed before traffic was sufficient

to pay fair dividends, or if they had met with heavy losses due to no fault of their own. But such has not been the case. The roads have almost always paid fair and recently enormous dividends. One line did lose its property in the fire of 1871, but that was over a generation ago and the profits were so large both before and after the fire that there has been ample opportunity to recoup all losses.

The large profits which the companies are paying show that they can afford to pay the city a generous compensation either in the form of cash payments or lower fares. Further, the fact that the companies are using franchises worth millions and are paying nothing for \$75,000,000 in franchises, leads to the conclusion that the companies ought to pay considerable. If the "water" were squeezed out they could pay 20 per cent. of gross income to the city and still declare 6 per cent. dividends, while accumulating a depreciation fund of 4 per cent. annually. Or, fares could be lowered to 4 cents, and 6 per cent. dividends and 4 per cent. depreciation set aside. Such a policy would enable fares to be still further lowered, as the traffic will increase and a depreciation fund of 4 per cent. will keep down fixed charges or increase capital value without increasing outstanding liabilities. Whatever course may be adopted, it is certain that the time has passed when private corporations can expect to use the city's property without paying for it. And property worth \$75,000,000 is no longer to be had for the asking. The problem is: What return is fair to the city and to the companies? Neither can afford to be too grasping. The welfare of each depends upon an equitable solution.

ACCOUNTANT'S REPORT.

EXHIBITS I TO VI.

BY EDMUND F. BARD.

EXHIBIT I.—CHICAGO CITY RAILWAY CO.

Sec. 1.—Financial Operations before Introduction of Cable Traction.

This company was incorporated February 14, 1859, by special act of the Illinois Legislature, and immediately succeeded to certain rights granted to sundry other persons by the city council of Chicago August 16, 1858, for the construction and operation of street railroads in the city of Chicago, work upon which had already commenced November 1, 1858. By April 25, 1859, little over one mile of single track road on State St. from Randolph St. to 12th St. was in operation. Two months later, the road was extended to 22d St., the southern limits of the city at that time.

The rails of this road were spiked to the planks of the corduroy road then existing in State St. The equipment consisted of four cars and 25 horses.

Fourteen years later the mileage had increased to 23 miles single track and the equipment to 75 cars and 600 horses. Seven years later the mileage was 45.679 miles single track and the equipment 292 cars and 1,468 horses.

Of the 45.679 miles of single track road existing January 1, 1881, three miles, on Cottage Grove Ave. from Oakwood Boulevard to 55th St. and thence on 55th St. to Lake Ave., was steam dummy road.

Incidentally it may be said that "the cost per day of feeding each horse was 22.6 cents; grooming, 8.9 cents; for other help, including foremen, nurses, watchmen and watermen, 8.6 cents; of tools, blankets and medicine, .01 cent; of bedding, 4 mills, and of shoeing, 4.2 cents, a total of 46 cents."

In 1881 cable power, as a means of transportation, was introduced, and by January 27, 1882, the first section of 9.033 miles single track cable road built in Chicago was in successful operation. Its effect in reducing the operating expenses of the company was immediate, the cost of operating a car per mile being 11.2 cents, whereas by horse power it was 25.6 cents, and by steam dummy 19.8 cents. The gross receipts per cable car per mile were 23.7 cents, showing the ratio of operating expenses for the new motive power 47.3 per cent.

By May 23, 1883, 17.898 miles single track cable road was in operation, and by November 21, 1887, a total of 33.585 miles single track had been built.

By the end of 1893, 30.261 miles single track road of that character were built, of which 9.114 miles were new extensions of road and the remainder old horse road converted into trolley road. No further work of this description was done till 1895, when steps were taken to convert the remaining horse road of the company into electric road, and by December 31, 1897, only 5.074 miles single track horse road remained.

Prior to December 31, 1880, no actual disbursements had been made on account of the first section of cable road subsequently built on State St. north of 39th St., with possibly the exception of \$23,998.36 expended on the building at State and 21st Sts. during 1880, which building subsequently became the power house of the section of cable road referred to.

Up to December 31, 1880, the books of the company show \$1,318,062.91 paid out for "Construction;" that is, road-bed, track and street paving. According to this, each mile of single track horse road then existing cost \$28,854.89.

There is nothing in the books to show any credit to this account for depreciation, and, considering the many changes that occurred in the roadbed from the inception of the company to the date first referred to, all of which are part of the early history of street transportation in Chicago, there is reason for assuming that the construction account of the company on December 31, 1880, represented not only the first cost of all original road, but all changes and reconstruction thereof thereafter.

There being no special reason for disposing of this question accurately, no examination of the books has been made further back

than 1881, except to show the actual cost of road built during the five years immediately preceding the introduction of the cable system. For example, in 1877-8, a double track road was built on Indiana Ave. between 39th St. and 51st St., and thence on 51st St. east to Grand Boulevard, a distance of 3.375 miles single track, at a cost of \$44,026.14, or \$13,044.80 per mile of single track. During the same period a line was constructed on Halsted St. from O'Neill St. south to the Union Stock Yards, a distance of 4.028 miles single track, at a cost of \$53,488.59, or \$13,279.20 per mile of single track.

Prior to the introduction of the cable system, it was the exception rather than the rule to pave the streets between the rails in constructing the road, nor has it ever been the custom of the company to do so in extending its road into outlying territory. As late as November 18, 1888, an official statement of the company shows that 23.14 miles of single track, or 13 per cent. of the present mileage, was paved with "dirt," in other words, not paved at all. On January 1, 1883, only $1\frac{1}{2}$ miles of road on Clark St. and 1 mile on Halsted St., aside from the cable roads on State St. and Wabash and Cottage Grove avenues north of 39th St. were paved with stone.

Such pavement as existed prior to December 31, 1880, consisted of cheap macadam costing about fifty cents per square yard, or \$2,346.67 per mile of single track laid. This was the character of pavement laid in 1877-8 in the construction of 1.663 miles single track road on Wentworth avenue from Archer avenue to 29th street, the cost of which section of road, including paving, was \$25,531.72, or \$15,352.81 per mile single track.

No extensions of road were made in 1879, but the following year the sum of \$37,216.43 was expended on Clark St. in paving the street and laying new rails. From all I can learn of the particulars of this expenditure, it seems to have been for granite paving for 2.347 miles single track north of 12th street and new 63-lb. rails for the entire line, indicating that the cost that year per mile single track for granite was \$2.13 per square yard, and for 482 tons of 63-lb. rails at \$29 per ton, \$13,978, or \$3,215.55 per mile single track. The first section of road built on the South Side was on State St. from Randolph St. to 12th St., and was opened for traffic in 1859. It consisted of a single track road with turnouts. Instead

of being laid on stringers and cross-ties, the rails were spiked to the planks of the corduroy road then constituting the only paving the street possessed. Subsequently a double track was laid and the street between the rails paved with granite, as far south as 12th St.

This was the condition of the road on December 31, 1880, except that the rails had been extended south to 41st St.

Estimating the cost of granite paving at \$9,901.34 per mile single track, the same as on Clark St., and the cost of the remainder of the road-bed, including rails, at \$13,044.80 per mile single track, the same as on Indiana avenue, the total cost of a mile of single track horse road would be \$22,946.80, including granite paving, which is about \$6,500 more than the same road would cost at the present time.

Assuming that the only lines of road possessing no pavement of any character except "dirt" were those already referred to on Halsted St. and Indiana Ave., the following estimate of the cost value of 45.679 miles single track road existing on December 31, 1880, is over rather than under the actual cost, viz.:

Miles Single Track.	Paving.	Total Cost.
11.515	Granite	\$264,224.80
26.761	Macadam	410,856.55
7.403	Dirt	97,514.73
45.679	Total	\$772,596.08

The difference between this total and the balance already stated as standing to the debit of "Construction" account on December 31, 1880, to wit., \$545,466.83, represents depreciation.

The financial condition of the company on the same date was as follows:

ASSETS.		
Roadbed		\$772,596.08
Real estate		234,423.63
Buildings		202,472.75
Horses, 1,441		151,061.28
Stable property		10,323.85
Stationary engines		11,864.60
Harness		13,307.21
Office furniture and fixtures		4,070.20
Cars—		
92 open, at \$725.00	\$66,700.00	
64 21-feet, closed, at 836.58	53,541.12	
78 16-feet, closed, at 800.00	62,400.00	
63 14-feet, closed, at 750.00	47,250.00	
Miscellaneous equipments	23,749.02	
		253,640.14

Bills receivable	2,666.00
Cash	3,976.41
Shop and track tools	12,732.59
Storehouse supplies	16,442.42
Total	\$1,689,517.16

LIABILITIES.

Capital stock	\$1,500,000.00
Bills payable	105,000.00
Accounts payable	47,093.67
Drivers' deposits	16,977.90
	<u>1,669,071.57</u>
*Surplus, December 31, 1880.....	\$20,445.59

Sec. 2.—Cost of First Cable Road.

It does not appear that any attempt has ever been made by any of the companies to charge off the large sum representing depreciation on account of the radical changes from horse road to cable road between 1881 and 1889, and from horse road to electric road between 1892 and 1897, and there is very little statistical information of value for this purpose on file in the accounting departments of the roads, and apparently no effort has been made to compile it.¹

The absence of data of this character has necessitated a tedious and laborious search of the records covering a business period aggregating 40 years for all the companies examined, for the purpose of ascertaining and preparing the necessary information for this report.

As regards the \$545,466.83 chargeable to depreciation on December 31, 1880, already referred to, it is suggested that perhaps a part of it represents an expenditure of some character in connection with buying out or otherwise disposing of the old opposition omnibus lines, the competition from which threatened insolvency to all concerned at one time prior to the introduction of the cable system.

¹According to the books of the company the surplus was \$676,092.43 on the date mentioned, but, as already shown, the difference between the totals represents depreciation, or, strictly speaking, the sum which, if credit to "Construction account," in other words, marked off to depreciation, would correctly represent the cost value of all the property that had ceased to exist or possess any further utility to the company in conducting its business, or for any other purpose.

²It is difficult with any degree of certainty to ascribe reason for the omission of the companies in this respect, but there is, of course, the supposition that any adjustment in the accounts that will convert an apparent surplus into a large deficit would be discountenanced by the stockholders as well as the management, and the average accounting officer has not the temerity to make the adjustment on his own responsibility.

As stated at the outset, no particular effort has been made to ascertain accurately the precise nature of the depreciation, since my examination of the records of the Chicago City Railway Company commences practically at January 1, 1881, on which date is recorded the first disbursement on account of the first section of cable road built in Chicago, viz.: that on State St. north of 39th St. Two years later, or in January, 1883, the final entry of cost is made in the books.¹

In constructing the line on State street, it was necessary to tear up and destroy 8.597 miles horse road then existing, and on Wabash and Cottage Grove avenues and on 22d St. from State St. to Cottage Grove Ave. 8.837 miles of additional single track horse road, making a total of 17.434 miles single track horse road destroyed, the original cost of which is still carried on the books to represent an asset, and thus constitute part of the present surplus of the company.

In addition to the horse road converted into cable road on State street north of 39th street, 500 feet of brand new cable road was built on State street from 300 feet north to 200 feet south of 39th street, 1,350 feet on Wabash avenue from Madison street to Lake street, and 450 feet on Lake street from State street to Wabash avenue, a total of 0.436 miles single track entirely new road, making the total mileage of the first State street cable line 9.033 miles single track.

There was also built 150 feet of single track new cable road on Cottage Grove Ave. south of 39th street, making a total mileage of the Wabash and Cottage Grove Ave. line 8.865 miles single track.

From the records I find the general character of the road described as follows:

¹These dates do not fairly indicate the time consumed in the construction of the road, as may be inferred from the official report of the president of the road to the stockholders at their meeting in January, 1882, wherein it is stated that "work on the State street cable road commenced June 27, 1881, but was delayed by sewerage improvements made by the city till about the middle of August. By the middle of December, 1881, nine miles of single track were constructed."

At the stockholders' meeting the following year, he stated that "cars commenced running January 28, 1882, between 21st St. and Madison St., and a few days after that to 39th St. and also around the eight blocks north of Madison St., commonly known as the loop."

The first payment for labor on account of the Wabash and Cottage Grove Avenue cable lines north of 39th St. was in February, 1882, and the last in May, 1883.

"The track is supported by heavy yokes made of 4x4 T-iron placed four feet apart and the slot is formed by parallel bars of Z-shaped iron weighing 600 lbs. to the yard—the whole iron frame-work thoroughly braced and bolted—is surrounded by a heavy and substantial body of concrete, made with the best English Portland cement."

Ex-President Holmes furnishes the following further description:

"The construction consists of an underground tube, through which the cable, supported by grooved pulleys, passes in constant motion, etc. The tube is provided with sewer connections for drainage and an open slot on the top, through which passes a grappling device etc. The metal used for lining the grip performs 2,000 miles of service, when it requires renewal, etc. More power is required during a snowstorm, but in ordinary conditions the operation of 20¼ miles of cable in Chicago has required 477 horse power, of which 389 was used in moving the machinery and cables and 88 to move the 240 cars."

In the construction of the 9.033 miles single track section on State street the following material was used:

Iron	lbs. 8,000,000
Bolts	250,000
Wagon loads of gravel, sand, stone, etc.....	50,000
Cement { English	bbls. 13,000
{ American	12,000
Cords rubble stone	350
Brick	214,000

The cost in detail was:

1,002 tons steel rails, 63 lbs. to yd., at \$27.41.....	\$27,465.77
11,015 iron yokes, at \$9.14 each.....	100,669.38
300,000 feet lumber, at \$18.53 per M.....	5,559.38
Castings, hardware, etc.....	223,697.44
Cement, gravel, sand, rubble, grading, labor, etc.....	153,941.23
Teaming and freight	7,149.59
Total	\$518,482.79

Strictly speaking, this was the total cost of the 9.033 miles single track belonging to the State street line. The total cost of the 8.865 miles single track line on Wabash avenue and Cottage Grove avenue was \$696,857.46. The cost per mile on State street was \$57,398.74, and on Wabash and Cottage Grove avenues \$78,856.79, an increase of 33.49 per cent.

The details of the cost of the latter line were not scrutinized as closely as those for the State St. line, but apparently the per cent. of increase was practically uniform in all particulars. This may be inferred from the following comparison of material used in the construction:

Material.	State St.		Wabash Ave.	
	9.033 miles.	Per mile.	8.865 miles.	Per mile.
Iron	lbs. 8,000,000	885,000	9,000,000	1,016,000
Bolts	250,000	29,000	275,000	31,000
Wagon loads of gravel, etc.	50,000	5,500	60,000	7,000
English cement	13,000	1,400	15,000	1,700
American cement	12,000	1,300	2,000	230
Cords rubble	350	40	550	62
Brick	214,000	23,700	230,000	26,000

The cost of granite paving, which is not included in the above total, was for the State street line, 42,395 square yards at \$2.51, \$106,402.91; Wabash and Cottage Grove avenues, 41,475 square yards at \$3.59 per square yard, \$149,125.11, an increase of 43 per cent.

Adding the cost of street paving to the previous totals, we have the following:

Sections.	Total cost.	Cost per mile.
State Street	\$624,885.70	\$69,178.09
Wabash and Cottage Grove Ave.	845,982.57	95,731.98
17.898 miles single track	\$1,470,868.27	\$82,180.60

Only one power house, with its necessary appurtenances and machinery, was constructed to operate the two sections of cable road described, the cost of which was as follows:

21st St. power house, engine foundations and smokestack.	\$52,214.35
Engines and boilers, 4 automatic cut-off engines of 250 h. p. each, 4 steam boilers aggregating 1,000 h. p.	55,153.03
Cable machinery	38,633.27
Total	\$146,000.65
To this should be added expenditures on the power house building in 1880.	23,998.36
Total cost of power plant	\$169,999.01

This does not include the cost of land on which the power house stands.

The total cost of the entire system was \$1,640,867.28, or at the rate of \$91,678.81 per mile of single track.

The total cost, according to the books, of the State street roadbed and conduit was \$910,034.41, instead of \$624,885.70, as stated above, an excess of \$285,148.71; and the cost of the other roadbed and conduit \$858,634.24, instead of \$845,982.57, as stated above, an excess of \$12,651.67. This is due to the following items, which I find included in the cost on the books:

Printing, stationery, telegrams and expenses of that character.....	\$2,484.98	
Patents	16,333.00	
Legal expenses	2,894.05	
License fees	3,000.00	
Interest on bonds	3,735.57	
Cable (only part of the cost).....	7,022.76	
C. B. Holmes, State St. line.....	\$249,678.35	
Wabash Ave. line.....	12,651.67	
		262,330.02
Total		\$297,800.38

None of these disbursements have any immediate connection with the cost of the roadbed proper, although legitimate charges to "Construction" account, with possibly the exception of the sum paid or charged to C. B. Holmes, about which nothing seems to be known, as the details are not on record.

It appears that the building of the first section of cable road "was accomplished in the face of opposition and uncertainty which would have staggered men of less energy and pluck," and that "a large and powerful element among the citizens of Chicago was openly opposed to the change. Some of the newspapers ridiculed and attacked the company in every way possible."

This is the testimony of Mr. Holmes himself, and it suggests at once that possibly some of the money charged to his account above may have gone to quiet this opposition in a measure. Such expenses are not always inseparable from street railroad construction, especially new extensions; in fact, this report shows large payments of this nature by all the companies examined, and for changes of a less radical character than the one mentioned above. It would therefore be remarkable if no such expense was incurred in connection with the introduction of the first cable road into Chicago, and as there is no other item or division of the total expense into which such disbursements could be covered except the \$262,330.02 above referred to, it is not improbable that they are there. There is nothing, however, on record either to prove or disprove it.

There were other unusual expenses, but of a different character, incurred in the construction of the first sections of cable road on State street, which were not repeated in subsequent extensions of the system, all of which, allowing for difference in structure, would seem to show that a fair estimate of the cost of such sections of cable road as were subsequently built on the North and West Side

roads, the actual cost of which is not shown by the books of the companies, can not greatly exceed the cost of the first two sections of road built on the South Side.¹

Sec. 3.—Cost of Cable Roads Compared.

All of these circumstances, together with the fact that the construction of the section of cable road referred to was essentially experimental, necessarily involved exceptional expenditures not duplicated in sections of cable road subsequently built, the cost of which, compared with that of the first section, brings out clearly the excessive cost of the first two sections built on the South Side.

On the other hand, in using this cost as a basis for estimating the cost of the first sections of cable road built on the North and West Sides, allowance must be made for any differences in physical structure of the roads. In lieu of the construction accounts, access to which, as elsewhere explained in this report, has been denied me, I have made diligent efforts to obtain copies of the specifications under which all of the different roads were built, for the purpose of comparison, but without success.

The brief description of the South Side cable system already given, together with the actual cost, as shown by the books of the Chicago City Railway Company, will afford an approximate basis for estimating the cost of the North and West Side systems; at least, the difference in cost may be approximated by comparing the above mentioned description with that given of the North and West Side systems in the semi-official publication entitled "A History of the Yerkes System of Street Railways in the City of Chicago," to-wit:

"San Francisco was the first city to make a successful trial of this plan of transportation. Chicago was next to adopt the cable for her South Side railway.

¹For example complaints are uniformly made in the case of each company of encountering beds of quicksand and the pipes of the water, gas and sewer systems, and that in some instances these systems had to be entirely rebuilt at the expense of the companies. In addition, on the South Side the claim is especially made that "for a mile and a half south of 12th street, on State street, an average fill of three feet was necessary and the balance of the way from one to two feet of excavation was necessary to secure the proper grade."

In the annual report to the stockholders in January, 1882, it is stated that "as nearly as can be computed, there has been expended on the street and in machinery, foundations and buildings fully \$150,000 for the benefit of other lines, that is, the sum might have been saved had the company no expectation of ever operating any other lines than State street." The difficulty of obtaining granite blocks is also referred to as follows: "To get sufficient paving blocks it was necessary to purchase from two quarries in Wisconsin, one in Maine, three in Massachusetts, one in Maryland, one in Virginia and three in New York."

Then came Philadelphia. When the North Chicago system was under consideration by Philadelphia capitalists, it was natural that they should pattern rather closely after the most approved methods of cable railway construction in existence. In general it may be said that the North and West Chicago cable railway is the Philadelphia system with improvements added. The Philadelphia conduit consists of a tube of sheet iron 1-8 inch thick and 4 feet 5½ inches in length, bent into a particular shape. The tube is supported by, and bolted to, iron yokes placed 4 feet 6 inches apart between centers. The yokes rest on beds of concrete about 6 inches deep, and there is a concrete filling around the tubes between the yokes. To the yokes are bolted the slots and rails which are of steel and peculiar cross section. The slot is bolted to the shoulder of the yoke. Each rail and slot is 31 feet in length. At every 31 feet 6 inches there is a single manhole, one side of which is similar to one-half of a yoke, the other side being of special design. Within the manhole, 5 inches below the conduit proper, and on each side of the manhole, there is a projecting shelf upon which are bolted two channel bars. These channel bars are placed on one flange with the flange extending away from the center line of the conduit, and run parallel to this line. Upon these are bolted the pulley and its attachments, over which runs the cable. At every square there is a double manhole or 'grip hatch,' so called, which extends on both sides of the conduit proper, and is essentially a single manhole on each side of the center line of the conduit. These manholes lie between the track and the slot. The ends of the manholes take the places of two yokes, supporting the tubes. To these yokes are bolted the sides and bottom—sheet-iron plates—thus forming a hollow square enclosure. Each hole is furnished with a lifting door large enough to allow the passage of one man.

"Running the entire length of the line, and below the conduit, is a nine-inch terra cotta pipe for drainage. This pipe connects with the sewer at the foot of the grades."

The most noticeable difference between the two systems, as shown by the respective descriptions, is that the concrete conduit of the North and West Chicago roads is lined with sheet iron ½ inch thick, whereas this lining is entirely absent from the concrete conduit of the South Side road, in the construction of which a wooden frame was used about which the concrete was packed and the frame afterward withdrawn, while the iron lining in the former case was intended not only to be a fixture, but at the same time to serve the purpose of a frame or mold about which to pack the cement.

Another noticeable difference is the absence of any wood or lumber in structure of the North and West Chicago roads, whereas 300,000 feet of lumber was used in the construction of the 9.033 miles single track road constituting the first section of cable road built on the South Side. All of this wood was removed, however, in 1887, having been used for stringers under the rails.

At the same time, new steel rails, weighing 70 pounds to the yard, were laid, the entire cost of reconstruction being \$53,642.65,

of which sum \$34,378.62 represented the cost of taking up and relaying the track and \$19,264.03, or 45.44 cents per square yard, the cost of relaying the granite pavement.

By this change in the structure of the South Side road the physical characters of the two cable systems are brought closer together and afford a better basis for estimating the unknown cost of one by comparison with the known cost of the other.

Sec. 4.—Construction Expenses in Detail.

The cost of the cables used in operating the first two sections of 17.893 miles single track road on the South Side was \$27,779.44, or at the rate of 26 cents per foot.¹

For the first two sections of cable road built on the South Side there were constructed 102 grip-cars at a cost of \$102,845.55, or an average of \$1,008.29 each, fifty of which were for use on the Wabash and Cottage Grove avenue line and the remainder on the State street line.² The same number of grips were also made at a total cost of \$12,465.22, or \$122.21 each, and for use on the two roads in the same proportion.

There was apparently no increase in the number of passenger cars during 1881; at least, no increase was occasioned by the opening of the cable line on State street in January of the following year, but by the end of 1882 "fifty new large and handsome passenger cars, at a cost of \$73,771.00, or \$1,475.42 each," were added to the rolling stock of the company.

On May 21, 1887, an extension of the cable road on State street, from 39th street to 63d street, was completed and in operation, and on November 21, 1887, an extension of the cable road on Cottage Grove avenue, from 39th street to 67th street, and on 55th street from Cottage Grove avenue to Lake avenue, including a loop at Jackson Park, was also completed and in operation.

The construction of the State street extension involved the tearing up and destruction of 0.256 mile single track horse road built prior to December 31, 1880, and 5.744 miles single track new horse

¹These were Swedes steel cables, the tensile strength of which is 78,000 lbs., as against 54,000 lbs., for iron cable at 23 cents. per foot.

²The cost of the grip-cars differed materially, the first one built costing \$777.16, the second, \$973; the next forty, \$687.15, and the remainder at a figure which brought the average of the entire lot up to \$1,008.29, as before stated.

road built subsequent to that date and contemporaneous with the introduction of the first section of cable road on State street, making a total of six miles single track new cable road built at the cost of \$330,040.82, including granite paving, or at the rate of \$55,006.80 per mile single track.

The extension on Cottage Grove avenue and 55th street necessitated the tearing up of 3.125 miles single track horse road built prior to December 31, 1880, and 0.126 mile single track horse road built subsequent to that date. It also involved the construction of three miles single track, entire new track, or the conversion of the single track line on Cottage Grove avenue from 39th street to 55th street, from Cottage Grove avenue to Lake avenue, into a double track road, and three miles single track entirely new road on Cottage Grove avenue south of 55th street to 67th street, and 0.436 mile single track entirely new road for the loop at Jackson Park, making altogether 9.687 miles single track new cable road extension, at a cost of \$575,408.63, including granite paving, or at the rate of \$59,400.09 per mile single track.

Partly in anticipation of the opening of the extension on State street, and partly owing to the growing traffic on the line north of 39th street, it became necessary to install two new 500 horse power engines and two new 500 horse power boilers at the power house at 21st street and State street, and to transfer the four original smaller ones for the use of the extension south of 39th street. The cost of installing the new engines was \$44,139.17 and boilers \$20,292.44. There was also expended on the 21st street power house \$11,488.56. Subsequently two more 500 horse power engines were installed at the 21st street power house at an additional cost of \$11,000. By these changes the 17.898 miles of road north of 39th street were operated by four engines, aggregating 2,000 horse power, or 111 horse power per mile, and the six miles of road south of 39th street by four engines, aggregating 1,000 horse power, or 167 horse power per mile.

The entire cost of the six miles single track extension south of 39th street was \$494,210, including power house, engines, boilers, cable machinery, granite paving, etc., or at the rate of \$82,368.33 per mile single track, and the corresponding cost of the Hyde Park extension (9.687 miles single track) was \$842,038.11, or at the rate

of \$86,924.54 per mile single track. For this section of road a power house with all necessary machinery was erected on Cottage Grove avenue and 55th street, including three 500 horse power boilers and two engines of 1,000 horse power capacity each.

During 1890 the cable line on Cottage Grove avenue was still further extended south from 67th street to 211 feet south of 71st street, an additional 1.08 miles single track to the system at a cost of \$64,152.10, and the same year additional engines were installed in the 55th street power house at an expense of \$26,500. New improvements were also made to the cable machinery at the 21st street power house, at a cost of about \$40,226.80.

In 1892 the new downtown loop was built for the Wabash avenue line, which had heretofore been using the same loop as the State street line. The new loop was built on Wabash and Michigan avenues, from Madison to Randolph streets, and on Madison and Randolph streets from Wabash avenue to Michigan avenue, thus adding 0.501 mile single track to the Wabash avenue cable line. The cost of this loop was \$58,465.97.

In the construction of that part from Randolph street to Madison street on Wabash avenue, it became necessary to move the existing cable track between these points, then forming part of the joint loop on State, Lake and Madison streets and Wabash avenue, from the center of Wabash avenue to the west side of the center line, in order to make room for the new track, thus increasing the amount of road to be built to 0.667 mile single track, so that the rate of cost per mile was \$87,655.02.

No new granite blocks were required for the paving, the old granite paving being relaid. From the best information I can obtain, the average cost of labor per square yard for laying granite block is \$0.46, and as there were 3,131 square yards of paving done, the cost, if deducted from the total \$58,465.97, would leave \$57,025.71 to represent the total cost of the section of cable road referred to, or at the rate of \$85,495.82 per mile of single track.

As the cost of the last section of cable road built two years previous was \$59,400.09 per mile single track, exclusive of paving, the increase in cost for the loop was at the rate of \$26,095.73, or 43.93 per cent. per mile single track.

This increased cost for road of precisely the same physical character as that previously built was undoubtedly due to greater obstructions encountered in the streets in the business district than were met with in streets more remote.¹

Reference has been made to the fact that in 1887 all the wood originally contained in the section of cable road on State street north of 39th street was entirely removed, and at the same time new 70-pound steel rails laid, at a total cost of \$53,642.65. The same improvement was made in the 8.865 miles single track road on Wabash and Cottage Grove avenues north of 39th street, the same year, at a total cost of \$53,701.80, of which sum \$35,852.16 represented the taking up and relaying of the track, etc., and \$17,849.64, or 42.90 cents per square yard, the cost of relaying the old granite pavement.

Including all the improvements enumerated, the 35.166 miles single track cable road cost in the aggregate \$2,606,280.24, or an average of \$74,113.64 per mile single track, and the aggregate cost of the power plants, including power houses, engines, boilers, cable machinery, etc., \$754,444.64, or a grand total of \$3,360,724.88, or \$95,570.30 for the completely equipped and operative system, exclusive of rolling stock and cable.

Sec. 5.—Cost of Trolley Lines.

Between December 31, 1880, and December 31, 1892, 104.545 miles single track horse railroad was built, of which 5.870 miles single track was converted into cable road as already stated. Of the remainder, there still exists 4.818 miles single track, 2.752 miles single track have been transferred or leased to other companies, 1.003 miles single track have been torn up and abandoned, and 90.102 miles single track have been converted into trolley road.

¹Elsewhere in this report it will be found that in the construction of the State street loop extension of the West Chicago Street Railroad, built about the same time as the Michigan avenue loop, almost the same ratio of increase occurs in the cost over that of the Blue Island Avenue, Halsted and Van Buren Street line. For example, the cost of the latter line per mile was \$96,455.43 and of the State street loop extension, \$139,221.37 per mile, both single track, showing an increase of 44.34 per cent., or a slight difference in the rate of increase in the Michigan avenue loop and other South Side cable roads.

There is reason to believe that the obstructions encountered were not so great in the case of the Michigan avenue loop as in the case of the West Chicago loop, the district covered being less of a business center. In any event, the comparison is valuable in that it seems to indicate clearly that whatever structural differences there may be in the two systems of roadbed, the extreme difference in cost does not average more than \$40,000 per mile, single track.

The introduction of electric power occurred in 1892. During that and the following year 30.261 miles single track electric road was built, at an expenditure of \$519,392.15, or an average of \$17,-185.17 per mile. This average, however, is not a safe basis for estimating the cost of a mile of trolley road, as may be inferred from the following detailed schedule of the different sections of road built and the actual cost thereof, viz.:

	Miles, S. T.	Total Cost.	Cost p. Mile.
On 47th Street, from—			
Kedzie Ave. to Leavitt St.....	2.5	\$30,755.72	\$12,302.29
Leavitt St. to Paulina St.....	1.25	27,111.20	21,688.96
Paulina St. to Ashland Ave.....	0.25	4,248.91	16,995.64
State St. to Cottage Grove Ave.....	2.	41,404.60	20,702.30
Cottage Grove Ave. to Drexel Boulevard...	0.302	6,356.38	21,047.62
Drexel Boulevard to Lake Ave.....	1.248	19,298.59	15,463.61
Ashland Ave. to Halsted St.....	2.	22,631.27	11,315.64
Halsted St. to State St.....	2.	24,604.61	12,302.31
On 63d Street, from—			
Ashland Ave. to Center Ave.....	1.	19,401.19	19,401.19
Center Ave. to Ventworth Ave.....	3.936	83,752.22	21,278.52
Cottage Grove Ave. to Ill. Cent. R. R....			
Grace, 62d, 64th and Stony Island loop....	0.709	7,731.79	10,905.20
Illinois Central R. R. to Stony Island Ave.	0.564	12,010.09	21,294.50
Kedzie Ave. to Central Park Ave.....	1.	11,891.86	11,891.86
On 61st Street, from—			
State St. to Wabash Ave.....	0.15	2,487.78	16,585.20
Wabash Ave. to South Park Court.....	3.674	53,967.59	14,689.06
South Park Court to 60th St.....			
Wentworth Ave. to State St.....	0.5	10,811.93	21,623.86
On 35th Street, from—			
State St. to Ullman St.....	3.178	67,287.22	21,162.30
Ullman St. to California Ave.....	4.	65,841.96	16,460.49
Subsequently this line was extended from—			
State St. to Michigan Ave.....	0.163	3,449.45	21,162.30

Connection was also made between 61st and 63d streets on Cottage Grove avenue and on State street from 61st to 61st street viaduct, and on Wentworth from 61st street viaduct to 63d street, a distance of one mile, single track, at a cost of \$7,797.24, making a total cost, including the extension on 35th street, of \$522,841.60, and an average per mile of \$17,585.17.

No extensions of this character of road were made in 1894, but during the following three years a total of 111.93 miles single track trolley road were built at an expenditure of \$2,335,341.44, or an average of \$20,953.64 per mile of single track.

As before stated, this average is misleading, as the same variation in cost of different sections of road composing the 111.93 miles occur as in the foregoing schedule. This variation is not due to any economy in construction of roads built under the same specifi-

cations, but to difference in the character of pavement, weight of rails laid, in some cases to the absence of any pavement at all and in others to the relaying of the old pavement, the first cost of which had already gone into construction account. Furthermore, the first trolley poles erected were wooden, whereas those subsequently erected were made of iron, which improvement with others in the overhead system increased the cost of overhead construction materially, as will be seen by the following schedule, viz.:

Line.	Miles, S. T.	Overhead Cost.	Cost p. Mile.
47th St.	11.55	\$20,600.57	\$1,783.60
61-63d Sts.	12.533	38,638.16	3,082.95
35th St.	7.341	32,714.24	4,456.38
29th St. ....	.170	68.30	4,025.30
Total.....	111.76	\$616,156.66	\$5,515.40

The variation in cost of the underground work was naturally not so marked, although improvements occurred in that department, as will be seen by the following schedule of the cost, viz.:

Line.	Miles, S. T.	Overhead Cost.	Cost p. Mile.
47th St.	11.55	\$5,414.42	\$1,346.00
61-63d Sts.	12.533	20,082.66	1,002.40
35th St.	7.341	8,178.56	1,114.09
29th St. ....	.170	171.08	1,006.40
Total.....	111.76	\$198,905.68	\$1,779.71

The cost of the rails laid on portions of the road was double that for other portions. The following schedule shows the weight per yard of the rails laid, the mileage and the cost, viz.:

Weight per yd.	Miles, S. T.	Total Cost.	Cost p. Mile.
45 lbs.	1.5	\$3,329.97	\$2,219.98
63 lbs.	45.47	141,123.59	3,107.97
70 lbs. ....	.72	1,042.90	3,453.30
72 lbs.	21	8,879.85	3,551.94
83 lbs.	74.78	306,937.40	4,094.62
90 lbs.	1.067	78,440.60	4,439.95
Total.....	12.354	\$539,754.31	

The cost per ton taken is uniformly \$28.03, the cost of the most recent purchases. If the exact cost of the different quantities of the same weight purchased at different periods were taken no satisfactory comparison could be made of the total cost of different sections built at different periods. For the same reason the following schedule of the cost of the street paving is based uniformly upon the average cost per square yard of the different kinds of pavement, to-wit: Granite, \$2; cedar block, \$1; macadam, 60 cents, and vitrified brick, \$1.60.

CHICAGO STREET RAILWAYS.

501

Pavement.	Miles, S. T.	Total Cost.	Cost p. Mile.
Granite	78.985	\$740,710.38	\$9,986.66
Wood	28.326	132,945.27	4,693.33
Macadam	11.163	31,435.01	2,816.00
Brick	8.5	63,829.31	7,509.33
Dirt	15.38	.....	.....
Total.....	142.354	\$968,919.97	

The cost of the miscellaneous material and labor entering into the total cost of the roadbed was as follows:

Line.	Miles, S. T.	Total Cost.	Cost p. Mile.
47th St.	11.55	\$58,783.55	\$5,089.80
61-63d Sts.	11.533	39,001.54	3,382.60
35th St.	7.341	15,493.66	2,110.50
29th St.	0.170	105.60	621.18
Miscellaneous	111.76	568,801.41	5,089.50
Total.....	142.354	\$682,185.16	

As already stated, certain sections of the road converted from horse to electric road were already paved with granite block, which did not warrant the laying of new pavement. This pavement was therefore relaid when the change was made, and thus its first cost necessarily became incorporated into the cost value of the new road. The original cost was \$284,242.13, which, if added to the actual expenditures between 1892 and 1897 inclusive, to-wit: \$2,858,183.04, make the total cost value of the 142.354 miles single track electric road \$3,142,425.17, divided as follows:

Line.	Miles, S. T.	Total Cost.	Avg. p. Mile.
47th St.	11.55	\$213,957.94	\$18,524.50
61-63d Sts.	11.533	209,851.69	11,195.76
35th St.	7.341	136,578.63	18,604.91
29th St.	0.170	3,252.80	19,134.12
Miscellaneous	111.76	2,578,784.11	23,074.30
Total.....	142.354	\$3,142,425.17	

The total cost of the electric portion of the road was as follows:

Line.	Miles, S. T.	Total Cost.	Avg. p. Mile.
47th St.	11.55	\$36,014.99	\$3,118.18
61-63d Sts.	12.533 ¹	58,721.22	4,685.33
35th St.	7.341	40,892.80	5,570.47
29th St.	0.170	855.38	5,031.65
Miscellaneous	111.76	815,081.34	7,293.14
Total.....	143.354	\$951,565.73	

¹It will be noticed that the mileage on 61-63d Sts. in the last schedule is one mile greater than in the previous ones. This is on account of the fact that the trolley wires on Cottage Grove avenue from 61st to 63d street are built over the cable track, the cost of which is included in the cable system. The case is the same on State street from 61st street to 61st street viaduct. The roadbed on Wentworth avenue from the 61st street viaduct to 63d street is also included in the general cost of the entire road on Wentworth avenue.

Independent of the electric portion of the road, the actual cost of the roadbed was as follows:

Line.	Miles, S. T.	Total Cost.	Avg. p. Mile.
47th St.	11.55	\$177,942.95	\$15,406.32
61-63d Sts.	11.533	151,130.47	13,105.05
35th St.	7.341	95,685.83	13,034.44
29th St.	0.170	2,397.42	14,102.47
Miscellaneous	111.76	1,763,702.77	15,781.17

Total.....142,354 \$2,190,859.44

The total cost of the roadbed is subdivided as follows:

Miles, S. T.	Material and Labor.	Total Cost.	Avg. p. Mile.
142.354	Steel rails.....	\$539,754.31	\$3,791.64
142.354	Pavement	968,919.97	6,806.40
142.354	Miscellaneous matter and labor.....	682,185.16	4,792.20

Total.....\$2,190,859.44

The total cost of the electric portion is subdivided as follows:

Miles, S. T.	What for.	Total Cost.	Avg. p. Mile.
143.354	Overhead	\$708,813.33	\$4,944.50
143.354	Underground	242,752.40	1,693.40

Total.....\$951,565.73

Referring to the first schedule, it will be noticed that the sections of road on 47th street from Leavitt to Paulina; on 63d street from Cottage Grove avenue to Stony Island avenue and from Wentworth avenue to Center avenue and on 35th street from State street to Ullman street, an aggregate of 8.928 miles out of the total 30.261 miles single track electric road built in 1892-93, cost about the same per mile to build. Each of these sections was built after the same specifications. Each is paved with granite block and each of the rails weigh 83 pounds to the yard. The other items of cost likewise correspond. As nearly 56 per cent. of the total electric mileage is composed of road of this character, its actual cost would seem to afford a better basis for computations than the general average of roads of irregular description.

The sections referred to cost \$21,298.36 per mile single track, divided as follows:

Paving	\$9,386.66
Rails	4,094.62
Miscellaneous material and labor.....	3,036.09

Total cost for roadbed.....\$16,517.37

Electric construction.....4,780.99

Total.....\$21,298.36

The items of paving and electrical construction include the cost of labor. The labor of laying the rails is included in the items of miscellaneous material and labor.

During 1895-6-7 thirty-four and a half miles single track road of precisely similar description was built, at an average cost, however, of \$25,863.89 per mile, divided as follows:

Paving	\$9,386.66
Rails	4,094.62
Miscellaneous material and labor.....	5,089.50
Total for roadbed.....	\$18,570.78
Electrical construction.....	7,293.11
Total.....	\$25,863.89

The engineers of the company estimate that the same road can be built to-day for \$18,077.85 per mile single track, divided as follows:

Paving	\$9,386.66
Rails	4,094.62
Miscellaneous material and labor.....	2,680.21
Total for roadbed.....	\$16,161.49
Overhead material.....	1,270.41
Overhead labor.....	170.34
Underground material.....	370.80
Underground labor.....	104.81
Total.....	\$18,077.85

Sec. 6.—Present Assets and Liabilities.

The cost value of the existing cable, electric and horse railroad of the company on December 31, 1897, is as follows:

35.166 miles S. T. cable road at \$74,113.64.....	\$2,606,280.24
142.354 miles S. T. electric road at \$22,074.72.....	3,142,425.17
256 miles S. T. horse road at \$22,946.14.....	5,873.31
2.818 miles S. T. horse road at \$24,995.73.....	70,427.96
2 miles S. T. horse road at \$14,720.08.....	29,440.16
182.594 miles.....	\$5,854,446.84
To this should be added the cost value of road leased to other companies.....	170,000.00
Also amount paid to the Ill. Cent. R. R. Co. for proportionate cost of raising tracks and building subway at 63d St. and Ill. Cent. R. R. right of way.....	60,590.92
Total.....	\$6,085,037.76

Deducting this total from the balance carried on the books of the company to the debit of construction account, shows a depreciation of \$4,811,565.05 carried in that account properly chargeable to profit and loss.

The real estate or land owned by the company on December 31, 1880, just before the introduction of the cable system, cost \$234,423.63.

Between that date and December 31, 1885, during which period the first two sections of cable road north of 39th street were built, and just before the extension of those lines south of 39th street, there was expended for land \$40,500.10, and between December 31, 1885, and December 31, 1892, or the year prior to the operation of the lines, there was expended \$160,387.67 for additional land, part for the enlargement of car barns, shops, etc., due to the increased traffic arising from the extension of the cable lines and partly for land upon which to erect two new cable power houses for the new extensions.

Between December 31, 1892, and December 31, 1897, \$49,584.39 was paid out for additional land, principally for a site for the new electric power houses at Oakley avenue and Leavitt street, between 48th and 49th streets, and on State street and 52d street.

The buildings owned by the company on December 31, 1880, cost \$202,472.75. Directly and indirectly the construction of the first two sections of cable road north of 39th street occasioned a further expenditure of \$167,568.83 for improvements of this character. Between December 31, 1885, and December 31, 1892, \$761,531.33 was paid out for extensive improvements in the buildings of the company generally and particularly for the erection of two new cable power houses for the extensions south of 39th street.

The introduction of the trolley system in 1893 necessitated the construction of the two new electric power houses already referred to at a joint cost of \$241,356.09, exclusive of machinery. Miscellaneous improvements costing \$135,537.71 were also made in other buildings prior to December 31, 1897.

The cable machinery for the first two sections of road north of 39th street cost \$137,925.47 up to December 31, 1885, and together with the extensions south of 39th street \$460,984.32 additional by December 31, 1892, making a total of \$598,909.79 for cable machinery. For the five years succeeding December 31, 1892, \$23,394.11 in improvements were made to the machinery.

The total cost of electrical machinery up to December 31, 1897, was \$586,549.31.

The two electric power houses, including machinery, but excluding land, cost \$827,905.40, divided as follows: Oakley avenue, \$392,462.99; 52d street and State street, \$435,442.41.

The total cost value of all the property of the company on December 31, 1897, is shown by the following statement:

ASSETS.	
Cable road.....	\$2,606,280.24
Electric road.....	3,142,425.17
Horse road.....	105,741.43
Leased road.....	170,000.00
Ill. Cent. R. R. construction.....	60,590.92
	<hr/>
	\$6,085,037.76
Real Estate—Land	\$484,895.79
Buildings	1,508,466.71
	<hr/>
	1,993,362.50
Machinery—Cable	\$622,303.90
Electric	586,549.31
	<hr/>
	1,208,853.21
Cable	38,744.46
Tools, etc.....	33,126.00
Office furniture and fixtures.....	9,247.01
Storehouse supplies.....	110,929.99
Uniforms	570.00
Auditorium stock (estimated value).....	2,500.00
Chicago Exhibition Co. bonds.....	10,000.00
Accounts receivable.....	16,268.20
Rolling Stock:	
339 Box Cars, at \$900.....	\$305,100.00
59 Box Cars, at \$725.....	42,775.00
6 Box Cars, at \$650.....	3,900.00
417 Open Cars, at \$725.....	302,325.00
259 Grip Cars, at \$650.....	168,350.00
390 Box Cars, motors, at \$1,000.....	390,000.00
340 Open Cars, motors, at \$825.....	280,500.00
2 Mail Cars, at \$900.....	1,800.00
2 Sweepers, at \$750.....	1,500.00
6 Sweepers, at \$500.....	3,000.00
5 Sweepers, at \$300.....	1,500.00
1 Sweeper, at \$400.....	400.00
61 Snow plows.....	20,781.60
	<hr/>
	\$1,521,931.60
Grips	25,031.84
Horses	8,270.00
Cash on hand and in bank.....	540,088.14
	<hr/>
Total assets.....	\$11,603,960.71
LIABILITIES.	
Capital stock.....	\$12,000,000.00
Bonds	4,619,500.00
Unpaid coupons.....	9,580.50
Unpaid wages.....	72,402.15

Unpaid bills (audited).....	73,599.42	
Deposits	11,855.00	
Accounts payable.....	65,051.15	
		<u>\$16,851,988.22</u>
Deficit.....		\$5,248,027.51

Sec. 7.—Stocks, Bonds and Dividends.

The authorized capital stock of this company outstanding January 1, 1881, was \$1,500,000, and for several years prior to that date it had remained at the same figure. With the advent of the cable system, accompanied by a large increase in traffic and net earnings, came a series of enlargements of capital in the form of both stock and bonds.

The first issue of bonds, in reality certificates of indebtedness, occurred in 1881, simultaneously with the construction section of cable road built on State street. The amount of this issue was \$750,000, of which \$738,600 were sold the same year and the balance in subsequent years.

On July 1, 1882, the capital stock was increased to \$2,500,000, and on December 1 the same year the bonds authorized were also increased to \$1,500,000. Reference is made, in the annual report to the stockholders, to the new issue of bonds as follows: "Five hundred thousand dollars of these bonds were issued to the stockholders at par and the money used in paying a dividend of 20 per cent to the stockholders." In other words, the bonds themselves were practically given to the stockholders, the transaction being essentially a "bond" dividend as distinguished from the common "stock" dividend. The 20 per cent. bond dividend was also on the full \$2,500,000 capital stock. Considering that the new investment of \$1,000,000 had only been in six months the return was at the rate of 50 per cent. per annum.

Prior to the increase in the stock, two quarterly dividends of $2\frac{1}{2}$ per cent. each had been paid that year and two more of the same rate were subsequently paid on the increased sum.

But this did not constitute the only profit derived by the investor. As the new stock was sold only to the old stockholders at par and had a market value of \$300 immediately after its issue, the conditions under which it was sold amounted to the payment of a bonus of 200 per cent., or an extra dividend of 133 $\frac{1}{3}$ per cent on the original \$1,500,000 of capital.

As regards the bond dividend, nothing in the financial condition of the company at the time, or in its previous history as regards dividends and earnings, warranted the payment of so large a dividend. For five years previous to 1881 the dividend rate had been uniformly 10 per cent. and for 1881 it was only 1 per cent. higher. Furthermore, the net earnings for 1882 were \$364,992.32. Deducting the regular quarterly dividends of 1882, aggregating \$190,747.50, leaves only \$174,244.82 applicable to the \$500,000 extra dividend, showing that the balance was apparently from the accumulation of previous years. But it has already been pointed out that the surplus account, according to the books, on December 31, 1880, was \$655,646.84 in excess of what it should be, and if to this is added \$355,098.08, the cost value of the 17.434 miles of old horse railroad just replaced by cable road, the total sum charged to depreciation would be \$1,010,744.92, which would wipe out the \$816,897.85 book surplus of December 31, 1881, and \$193,847.07 of the \$364,992.32 surplus earnings for 1882.

The correct surplus remaining after this adjustment of the accounts would have been sufficient to pay an average dividend of nearly 9 per cent. for the year, so that if the proper sum chargeable to depreciation had been marked off even as late as December 31, 1882, it would have had no material effect on the rate of dividends that had been uniformly paid each year, and which apparently gave the stock a market value of \$300 per share before any series of bonus distributions had been introduced.

Reference has been made on a preceding page to the fact that the management had to overcome serious opposition on the part of the general public to the introduction of the cable system, and it suggests at once the possibility of its being obliged to overcome greater opposition among those more directly interested by the distribution of the extra 20 per cent. dividend of \$500,000, and as the current earnings did not warrant it a bond issued was decided upon for the purpose.

On April 10, 1883, the capital stock was again increased \$500,000, or to a total of \$3,000,000. As in the case of the previous issue, the new stock was sold to the old stockholders only, and at par, although the market value of the general stock was \$300 per share before the increase and \$270 afterward. The bonus in this

case was 170 per cent. on the par value of the new stock, equivalent to an extra dividend of 34 per cent. to the old stockholders on their holdings prior to the increase.

The regular quarterly dividends this year aggregated 11 per cent., and from that time down to the present have been 12 per cent. per annum.

In 1885 another issue of bonds, amounting to \$1,000,000, was authorized. These bonds, like those issued previously, mature July 1, 1901, and bear $4\frac{1}{2}$ per cent. interest.

In the annual report to the stockholders at the meeting in January, 1886, reference is made to the new stock and bonds issued since 1880, as follows:

"Five years ago the capital stock of the company consisted of \$1,500,000.00 and was selling at something over \$300 per share. Since that time the company has grappled with and carried through the most gigantic enterprise ever undertaken by any street railway corporation in the world. It has issued and sold an additional million and a half stock at par and two and a half millions of bonds, the proceeds of which have been expended in a radical revolution of its system." * * *

During the same year \$1,500,000 new bonds were authorized and sold to provide funds to extend the cable roads south of 39th street, making total bonds outstanding \$4,000,000 and capital stock \$3,000,000. This year it was decided that the bonds should have something more substantial than the mere promise of the company to pay as security, and accordingly a mortgage or first lien on all the property of the company was created and pledged as security for the payment of the \$4,000,000, principal and interest, the right being reserved to increase the total bonds to \$6,000,000.

The following excerpt from the annual report to the stockholders in January, 1887, is interesting as showing that it was well understood that the property account of the property as it appeared on the books was inflated, to-wit:

"At the beginning of the year the books of the company showed a surplus of \$628,559.40 which has been accumulated for a number of years, and which, under ordinary circumstances, the shareholders would be entitled to have represented by bonds or stock and divided pro rata, according to the amount of stock held by each.

"But when the change was made from horse to cable power, it became necessary to dispense with a large amount of old construction, which was contained in the property account of the company, and the doing away with that construction would necessarily affect the amount of the so-called surplus. The only legal manner of determining how much, if any, of that surplus remained, would be by an appraisal made by duly appointed commissioners, under order of court, with returns made into court. Undoubtedly the amount of such appraisal, if now made, based

as it should be, upon the earning capacity of the road, would exceed by several millions of dollars the liabilities of the company, as represented by its capital stock and bonds. There are, however, many weighty reasons why no such appraisalment should be made at the present time, however desirable such a proceeding might be, when matters of taxation and other relations of corporate properties are more permanently settled by legislation." * * *

The report then goes on to describe a plan by which the same desired result may be attained without a reappraisalment, as follows :

"In other words, an amount equal to the surplus in '86 has been borrowed at 5 per cent. to pay for property, and the surplus itself has been loaned to the same creditor at the same rate of interest. Hence, whenever it shall be for the interest of the company to pay such loan by an issue of stock or bonds, that amount will be available for dividends without any appraisalment or court proceedings."

In plain words, by creating a fictitious liability an excuse is afforded for issuing new bonds or stock to take it up, but instead of applying the proceeds of the bonds or stock in that manner they are diverted toward the payment of dividends and the original condition of affairs restored. This proposition is so bald on the face of it as to scarcely require comment. It is chiefly remarkable as showing the frankness with which the exact situation is explained to the shareholders and their apparent ready acquiescence in the scheme proposed, as I find no record of any protest from that quarter; on the contrary, it has been the practice uniformly at each annual meeting of the shareholders to ratify, confirm and approve by specific resolution all the acts and doings of the management during the preceding year, so that there would seem to be no division of responsibility between the management and the stockholders either on this or any other account. Indeed, it would be most remarkable if any record could be found of opposition on the part of the shareholders to any plan of increasing the dividends whenever proposed by the management, however ill concealed the pretext may be, as long as any degree of plausibility can be found to support it. It is proper to state that the above proposition originated with a former management and it may be the ready disposition to thus openly juggle with the surplus had some bearing on the subsequent change in management, but if such is the fact there is nothing of record to indicate it; furthermore, no apparent effort has ever been made by subsequent managements to correct the property account in the books or determine the actual surplus of the company, the first step toward which would be the marking off of the cost value of the old

horse railroad, scarcely a vestige of which, in any tangible form, can now be found, and to that extent the present management is equally responsible for the payment of dividends from the, as ex-President Holmes rather contemptuously refers to it, "so-called" surplus which has been carried on the books as an asset down to the present time.

On April 1, 1888, another increase of \$1,000,000 in the capital stock occurred. As in previous cases, the new stock was sold to old stockholders only and at par, each stockholder being privileged to purchase such amount as was indicated by his pro rata share of the whole stock outstanding previous to April 1, 1888. Just previous to April 1, 1888, the market value of the \$3,000,000 stock then outstanding was \$350 per share, or \$10,500,000 in the aggregate. The increase of \$1,000,000 reduced the pro rata mathematical value of each share to \$263, and as a matter of fact the market quotations within a week after April 1, 1888, were \$260 per share for the new stock, or a premium of \$160 over the price paid for it by the old shareholders.

It would be impracticable to show whether or not any of the shareholders disposed of the new stock and thus realized the profit pointed out, but even if they did not and still held it at the date at which this examination is brought down, to-wit., December 31, 1897, the market price at which the stock could then be disposed of was \$235 per share, or a fraction off.

I understand that the privilege of purchasing these new issues of stock at par has rarely, if ever, been allowed to lapse by the old shareholders, and it would be surprising if the opportunity was allowed to pass, since the stock has always been good collateral for loans, and a stockholder, even if indisposed to increase his investment, could easily secure a temporary loan of \$100 per share, on the security of his old stock, with which to purchase the new shares, and after receiving the certificate dispose of it for cash at its enhanced market value, take up his loan of \$100, and pocket the premium of \$160 pointed out in the above case. In such a case the premium or bonus received is clearly equivalent to an extra dividend of 53 1-3 per cent. on the old stock.

On October 1, 1889, still another increase of \$1,000,000 in the capital stock occurred under similar conditions. This new issue

was sold to stockholders of record September 15, 1889. The market price immediately after was \$257 per share, the bonus \$157 per share, or 39 $\frac{1}{4}$ per cent. on the whole stock.

During 1890 \$500,000 new 4 $\frac{1}{2}$ per cent. bonds were issued, presumably on account of the Alley "L" road.

On January 2, 1891, \$2,000,000 new stock was authorized sold to stockholders of record December 15, 1890, at par. The bonus in this case was \$165 per share, equivalent to an extra dividend of 66 2-3 per cent. on the old stock. The same year \$120,000 new 4 $\frac{1}{2}$ per cent. bonds were issued, making a total of \$4,620,000. The amount outstanding on January 1, 1898, was \$4,619,500.

On April 1, 1893, \$2,000,000 new stock was sold at par to stockholders of record March 15, 1893. Before March 15, 1893, the market price was \$440 per share and after March 15, 1893, \$360 per share. The bonus in this case aggregated \$5,200,000, or 74.29 per cent. on the \$7,000,000 capital then outstanding.

This was not the only profit that year. In addition to the above, the ordinary dividends amounted to \$2,100,000. The \$3,000,000 Alley "L" road extension bonds, costing \$2,250,000, were also distributed pro rata, as well as the \$3,885,000 capital stock of the Alley "L" road, making a total of \$13,435,000, reckoning the extension bonds at cost value, or an average profit of nearly 150 per cent. on the entire \$9,000,000 capital stock in one year.

On July 1, 1895, another increase of \$1,000,000 in the capital stock occurred, the new stock being sold to stockholders of record of June 15, 1895, at par. The bonus in this case was \$185 per share, or an extra dividend of 20.55 per cent. on the old stock.

Still another increase of \$2,000,000 in the capital stock occurred in 1896, the new stock being sold to stockholders of record June 15, 1896, the bonus being \$122 per share, equivalent to an extra dividend of 24.4 per cent. on the old stock.

In the sixteen years from January 1, 1882, to January 1, 1898, the total dividends paid by the company, including the premiums on new stock issued, aggregate the enormous sum of \$37,602,187.50, or an average of 44.63 per cent. per annum.

Of this sum, \$12,657,187.50 represents the regular annual dividends of 10 per cent. in 1882, and 12 per cent. each year since, also the extra 20 per cent. bond dividend of 1882, and double cash

dividend of 1893. The stock bonuses represent \$18,810.00 and the Alley "L" road bonds and stock \$2,250,000 investment. The extra dividend of 1882 amounted to \$500,000 and that of 1893 to \$870,000.

The aggregate of the three last named dividends is \$3,620,000. Even if these had not been paid there is still a deficiency of \$1,628,000, which should have been withheld from the stockholders in the regular quarterly dividends in order that the proper adjustment in the permanent property account of the company might be made without showing a deficit in the balance sheet of the company on December 31, 1897.

During the same period the capital stock has been increased \$10,500,000 and bonds issued amounting to \$4,619,500, a total increase in the permanent indebtedness of the company of \$15,119,500. The increase in the book value of the assets has more than kept pace, but included in the stock value is \$5,248,027.51 properly chargeable to depreciation, as already set forth on a preceding page.

The permanent debt of the company on December 31, 1897, exclusive of capital stock, was \$4,619,500 and the floating debt \$232,488.22, making a total of \$4,851,988.22. Deducting this from the total assets, \$11,603,960.71, leaves \$6,751,972.49 to represent the capital stock of \$12,000,000, showing a deficit of \$5,248,027.51.

Sec. 8.—Mileage of South Side Lines.

CONSTRUCTION.

	Miles, S. T.
Horse road existing December 31, 1880.....	45.679
New horse road built since December 31, 1880.....	104.545
New cable road built since December 31, 1880.....	8.481
New electric road built since December 31, 1880.....	29.031
Total.....	187.736
Deduct—Horse road torn up.....	1.901
Horse road transferred.....	3.241
	<hr/> 5.142
Total mileage December 31, 1897.....	182.594

RECONSTRUCTION.

	Miles, S. T.
Horse road existing December 31, 1880, afterward converted to cable road...	20.815
Ditto, electric road.....	23.221
New horse road built since December 31, 1880, afterward converted to cable road	5.870
Ditto, electric road.....	90.102
Total changes.....	<hr/> 140.008

CHICAGO STREET RAILWAYS.

513

Add—Horse road built prior to December 31, 1880, unchanged.....	.256
Horse road built since December 31, 1880, unchanged.....	4.818
Cable road built since December 31, 1880 (new mileage).....	8.481
Electric road built since December 31, 1880 (new mileage).....	29.031
Total mileage December 31, 1880.....	182.594
From point of view of motive power, the mileage is as follows:	
Cable road.....	35.166 miles, S. T.
Electric road.....	142.354 miles, S. T.
Horse road.....	5.074 miles, S. T.
Total.....	182.594 miles, S. T.

Sec. 9.—Relations with the Elevated Roads.

It has apparently been the uniform policy of the three principal street railway companies in Chicago to pre-empt the territory in which they operate respectively, to their sole use, and a mutual understanding has been had that each company should confine its lines to its own particular territory. So far as the establishment of new competing lines is concerned, the geographical formation of the city and its division into three distinct sections, bounded by the Chicago river and its two branches, seems to aid in this monopoly, as practically all the bridges and tunnels connecting the three sections referred to, the only avenues of traffic between them, are absolutely in the control of either of the companies for street railway purposes.

In a report made to the Fidelity Insurance Trust and Safe Deposit Co., of Philadelphia, in 1888, by special examiners who came to Chicago for the purpose of examining the street railway properties of the city, especially those of the North and West sides, particular attention is called to these natural obstacles, as it were, to the establishment of rival lines, owing to the inability of new roads to reach the business portion of the city otherwise than by means of the bridges and tunnels referred to, and speaks of the wisdom shown by the management of the companies in bringing about a contract with the city to repair and maintain in good order the old city tunnels and bridges, going so far as to move certain bridges and build entirely new ones free from all expense to the city, at the only remaining accessible points of communication across the river, in return for the exclusive privilege of operating street cars across them, as calculated to free the companies from any possibility of

competition and inspire confidence in the permanent value of the securities of the companies.

On the South Side the situation is practically the same, all the main thoroughfares into the heart of the business district being in the exclusive control of the Chicago City Railway Company, so far as street railway transportation is concerned. Under these circumstances, the only means of breaking the monopoly was in the construction of an elevated railroad over private property.

On March 10, 1888, Col. A. F. Walcott, of New York, succeeded in securing a contract for the construction of an elevated road parallel to the two main lines of the Chicago City Railway Co., thus threatening the latter company with what appeared to be serious competition at the time. On March 28 of the same year the city council granted permission for the construction of the road from Van Buren St. to 39th St., on property to be purchased or condemned, adjoining the alley between State St. and Wabash Ave. Subsequently permission to extend the road south to 67th St. was granted.

The corporate title of the new company was the Chicago and South Side Rapid Transit Railroad Co., and the date of incorporation January 4, 1888. The contract for the construction of the road secured by Col. Walcott March 10th, 1888, was transferred by him May 1, 1888, to the Rapid Transit and Bridge Construction Company of New Jersey, organized for that purpose.

The immense outlay required for the purchase and condemnation of land had a tendency to greatly discourage the enterprise in its incipency, and the great uncertainty of its ultimate completion apparently occasioned very little apprehension on the part of the Chicago City Railway Company officials that the new road would ever materialize until after one mile of single track road of this description had actually been completed early in 1889, from 30th to 35th streets, adjoining the alley running parallel to and between State street and Wabash avenue.

About this time some of the directors and principal stockholders of the Chicago City Railway Co. became satisfied that if the World's Fair of 1893 was definitely located at Jackson Park sufficient funds would be forthcoming to complete the road to that point as projected. Accordingly steps were taken to secure control, and by

November 26, 1889, an agreement, amended December 10, 1889, was entered into between the Chicago City Ry. Co. and the Rapid Transit and Bridge Construction Co., by virtue of which the former was not only to cease all further opposition to the new enterprise, but aid substantially toward its completion, and in consideration thereof was to receive \$135,000 more than one-half the entire capital stock of the Chicago & South Side Rapid Transit R. R. Co.

The contract price for the construction of the double track road from Van Buren St. to Jackson Park was \$15,000,000, payable one-half in bonds and half in stock of the Chicago & South Side Rapid Transit R. R. Co. The estimated cost of the completely equipped and operative road was at the outset \$6,750,000. This estimate was made by Geo. B. Cornell, Chief Engineer of the first elevated road built in Brooklyn, N. Y.; \$750,000 was also set aside to reimburse the promoters, making a total of \$7,500,000. Bonds for this amount were authorized and the first lot of \$813,000 was sold for the same amount in cash.

It will thus be seen that the prospective profits of the deal were \$7,500,000, or the entire authorized capital stock of the company, \$3,885,000 of which was to accrue to the Chicago City Railway Company.

The care with which that company protected its interests in the premises may be inferred from the detailed arrangements under which the construction progressed. Not only was it represented on the board of the elevated road company by three out of five directors, but its president, C. B. Holmes, constituted one of a committee of two in full control of the finances, the other member being Col. Walcott, then vice-president of the construction company. Furthermore, all the bonds (\$7,500,000) when received from the printers, were deposited with the Northern Trust Company in escrow to be drawn out only in monthly installments not exceeding the actual cost of material and labor put into the foundations, structure, etc., as the work progressed, and then only on the joint order of the two committeemen, the certificate of the chief engineer as to the work actually completed, and a certified copy of each separate resolution of the board of directors of the elevated railroad author-

izing the issue of each installment of bonds by way of reimbursement of its outlay.

Even the new chief engineer was an independent personage, appointed by mutual consent, and the person selected for this post was taken direct from the consolidated elevated railroads in New York City, where he had been chief engineer for nearly fifteen years, in order that he might be absolutely unprejudiced in favor of either party's interests as against the interests of the other.

With each installment of bonds, a certificate for a corresponding amount of capital stock was issued to the construction company, and then returned by that company and split up into certificates of a smaller denomination, half, representing the amount due the Chicago City Railway Co., being transferred to the Chicago Trading Co., of which Samuel W. Allerton, one of the directors of the City Railway Co., was president, it having been stipulated that this share of the stock was "to be placed in the hands of such person or corporation as the Chicago City Railway Company shall designate," and by resolution of the board of directors of that company passed December 13, 1889, the Chicago Trading Company was designated "as the corporation to own and hold the said stock."

The first issue of bonds under the chief engineer's certificate of work done was for \$813,000, \$500,000 of which were purchased at par by the Chicago City Railway Company and the proceeds deposited in the Corn Exchange Bank to the order only of the two committeemen. Subsequently another lot of \$1,500,000 was sold, this time at 10 per cent. discount, one-half of which was taken by the Chicago City Railway Co. Another lot, \$73,000, at the same rate of discount, was also taken by the same company, making a total of \$1,323,000 in first mortgage bonds for which the Chicago City Railway Company paid \$1,240,700 in cash.

It is uncertain to what extent the company aided directly in disposing of the remaining bonds, but \$3,914,000 were sold in two lots to parties in Chicago, one a director in the company, at an average discount of 11.45 per cent., and the entire issue of \$7,500,000 produced a net return of only \$6,157,110, or less than the original estimate of the cost of the completed road.

Early in 1892 it became evident that the cost of the completed road would greatly exceed the first estimate, and thereupon dis-

sensions arose between the parties in interest, and for many months after the money gave out, the work of construction was at a full stop, the construction company apparently being unable to furnish more funds, and the street railway company apparently being unwilling to do so until the construction company retired.

Furthermore, the extra \$135,000, or controlling interest in the stock, which it was stipulated should be transferred to the street railway company, was being withheld by the construction company. Finally, on December 15, 1892, the construction company retired and the property was turned over to the elevated railroad itself to complete. The stock in dispute was also transferred to the Chicago Trading Company, making a total of \$3,885,000 standing in the name of that company out of a total of \$7,500,000.

One of the legacies left by the construction company was the general manager of that portion of the road that had been opened for traffic and was being operated by the construction company. This individual was also the nominal president of the elevated railroad company. Apparently he did not appreciate the logic of events, for he held on long enough to be removed to make room for the brother of the president of the Chicago City Railway Co.

At a meeting of the stockholders held February 16, 1893, a new issue of bonds, amounting to \$5,000,000, was authorized, purporting to be a first mortgage on the 63d St. line of the company. In the meantime the Chicago City Railway Co. had advanced \$912,000 more toward the completion of the elevated road, and between February 16, 1893, and March 27, 1893, \$350,000 additional, making a total of \$1,262,000, without other security than the ordinary notes of the elevated railroad company.

This remarkable display of confidence in the management of the elevated railroad company, considering the safeguard under which all previous advances had been made, may possibly be explained by the supposition that the two companies were at that time practically one and the same institution.

On March 28, 1893, a further advance was made, bringing the total up to \$1,500,000. Thereupon three new notes of \$500,000 each were issued by the elevated railroad company to the Chicago City Railway Co., each secured by 666 of the new \$1,000 so-called extension bonds, to take up the others. Between March 28, 1893,

and July 26, 1893, the total amount advanced was increased to \$2,250,000, secured by \$3,000,000 of the new bonds.

The road had now been operated through the built up portion of the territory through which it was constructed for more than a year, and it had long been evident that it could not pay operation expenses and interest on its bonded debt. In fact, up to March 30, 1893, it was \$30,000 behind on its operating expenses alone.

Under these circumstances there was no option left the Chicago City Railway Co. but to accept the \$3,000,000 collateral on the \$2,250,000 loan in full payment thereof, and return the notes to be canceled, and this was authorized August 5, 1893, and reported done August 29, 1893.

The first lot of \$500,000 first mortgage bonds purchased by the Chicago City Railway was disposed of for cash prior to 1893, and the balance, \$823,000, was likewise disposed of during 1893. On the other hand, the so-called extension bonds (\$3,000,000) were distributed among the stockholders of the Chicago City Ry. Co. as an extra dividend the same year (1893).

The \$3,885,000 stock of the elevated railroad company was surrendered by the Chicago Trading Company and new certificates were issued by the elevated railroad company in the names of the individual stockholders of the Chicago City Railway Co. in proportion to their holdings in the latter company.

EXHIBIT II.—NORTH CHICAGO CITY RAILWAY CO.

Sec. 1.—Lease of Road to New Company.

This company was incorporated February 14, 1859. The great fire of 1871 practically destroyed all of its property. In 1872 it began to reconstruct its track, and, by May 24, 1886, had in operation 44.774 miles of track (one mile of double-track road being counted as two miles of track).

On May 24, 1886, it entered into an operating agreement with the North Chicago Street Railroad Company, by the terms of which it surrendered control of its property for the period of 999 years. The motive for this act is set forth in the preamble to the agreement, a part of which is as follows:

WHEREAS, there is a growing demand upon said railway company by the public for improved motive power, extensions of new lines, and other improvements in connection with its plant and lines of street railway now owned, or leased by it; and

WHEREAS, the said railway company is without the facilities for constructing and operating to the best advantage such improved motive power, and purposes to make a contract with some party who has faith that the contemplated improvements will be profitable and who has the facilities for making them; and

WHEREAS, the said railway company has been in negotiation with said railroad company with the view of coming to some understanding that would be mutually satisfactory, upon which the said railroad company would contract to construct and put in operation the improved motive power and otherwise extend and improve the plant and lines of said street railway company, and have agreed upon the terms and conditions hereafter set forth; and

WHEREAS, the said railway company has accepted said terms and has requested that the said railroad company furnish for it the appliances necessary for such new motive power, and to operate the same, and also from time to time, when feasible and desirable, to make such extensions and other improvements as the public may require, and be approved by the Board of Directors of said companies, it being understood that a part of the lines of said railway company shall be cabled within the time hereafter named, and the balance from time to time, as may be directed in the manner aforesaid, and to insure the proper operation of the cable portion, the whole line must be put in exclusive charge of the railroad company, * * *

The "railway company" referred to was the North Chicago City Railway Company and the "railroad company" the North Chicago Street Railroad Company.

The terms referred to as having been agreed upon were, in brief, as follows:

"In consideration of mutual promises, and of the sum of one dollar by each to the other respectively paid, * * * [the parties concerned] * * * do covenant, promise and agree to stand with each other, as follows:"

1. Agreement to continue for 999 years " * * * and during said term shall bind the parties without any right in either company to revoke the same without the written consent of the other."

2. The North Chicago Street Railroad Company to construct, with reasonable speed, a cable road on North Clark Street, " * * * commencing at some convenient point near the north end of the Bridge crossing the Chicago River, to a point near Diversey Street in the town of Lake View," the same to be completed within two years after permission from the city and town authorities is granted " * * * and for the purpose of perpet-

uating reliable evidence to be used in an equitable adjustment between the parties hereto in case this contract shall be terminated in any manner as hereinafter set forth, it must keep an accurate account of its expenditures in and about said improvements, charging therefor the actual cost thereof, * * * .”

“The railway company will execute and deliver a mortgage of its franchises and property to secure the payment of all amounts and interest thereon at the rate of six per cent per annum, payable semi-annually, which shall be expended by the said railroad company in such construction, or the making of the improvements and extensions herein provided for. The amount so expended, with the interest thereon, as before provided, shall, in the event of the termination of this agreement by the parties hereto, or otherwise, or by reason of the intervention of any court of competent jurisdiction, at once become due and payable, and, if the amount found to be due shall not be paid, the said mortgage may be immediately foreclosed.”

3. The North Chicago Street Railroad Company is required to construct and operate such cable road as is necessary “ * * * other than above provided for * * [but] * * such additional construction shall only be with the assent of both of the parties * * [or] * * as shall be mutually agreed upon from time to time.”

“Such additional improvements shall be constructed by said railroad company, and be paid for, and be secured for the repayment thereof by railway company in the manner heretofore provided for as to that portion of said railway on North Clark Street, between the bridge and Diversey Street, or at the option of said railroad company, it shall have the right to require said railway company to issue its bonds for the amount of any such expenditures in the form, when due, and bearing such rate of interest as said railroad company may require, and to be secured by mortgage on all, or a part, of the property of said railway company.”

4. It is expressly stipulated that the North Chicago Street Railroad Company “ * * * will hereafter supply, at its own cost and charge, such cars, harness and horses as shall be necessary in addition to those now owned by the railway company, * * [and] * * the same thus supplied shall be the property of the railroad company.”

5. "Betterments shall be made and constructed by the railroad company as the same shall be agreed upon hereafter by the parties hereto. The cost of the same shall be paid to the railroad company in the manner heretofore provided in the case of construction of cables and motors. Within the term 'betterments' shall be comprised all construction, other than the Clark Street line and other improvements which the railroad company has agreed to do in connection therewith and replacements, such as extension of railways, new buildings and alterations and improvements of existing railways and buildings."

6. An appraisalment of all the personal property of the North Chicago City Railway Company is provided for, the North Chicago Street Railroad Company to be permitted " * * * to use the same or their proceeds without charge * * [but] * * in case of the termination of this contract for any cause, the railroad company shall pay to the railway company the amount of said appraisalment with interest only from the time of such termination."

As an offset, any property of the same character owned by the North Chicago Street Railroad Company that may be in use on the North Chicago City Railway Company's road at the time of the termination of the agreement must likewise be appraised and its value may be set off against the claim of the North Chicago City Railway Company.

7. Quarter-annually, commencing July 1st, 1886, the North Chicago Street Railroad stipulates to pay the other company \$37,500, also the interest on all bonds and mortgages of the "railway company" then outstanding "and which may hereafter be created in the renewal and extension thereof, and all which may hereafter be created for the betterments and new constructions heretofore provided for * * * "

It is further stipulated that " * * * as soon as the cable to be constructed on North Clark Street, as herein provided, is completed, the railroad company shall pay to the railway company out of its own funds \$500,000 in cash, or, at its own option, in lieu thereof the same amount in the shares of its capital stock, assessments paid * * * ."

Sec. 2.—Financial Condition in 1886.

The inventory of property transferred to the North Chicago

Street Railroad Company under the above agreement was as follows:

1,691 Horses, at.....	\$100	\$169,100.00
175 Box cars, at.....	700	122,500.00
175 Open cars, at.....	500	87,500.00
10 Snow-plows, at.....	500	5,000.00
6 Sweepers, at.....	1,000	6,000.00
6 Salters, at.....	200	1,200.00
7 Hay-cutters, at.....	50	350.00
575 Sets harness, at.....	15	8,625.00
9 Wagons, at.....	50	450.00
4 Buggies, at.....	50	200.00
1,400 tons of hay, at.....	10	14,000.00
Horseshoes and nails.....		1,500.00
Track material.....		6,750.00
Track tools, shovels, picks, etc.....		250.00
Material in hands of purchasing agent.....		420.79
Office furniture.....		500.00
Stable furniture, etc.—		
City Limits.....	200	
Lincoln Ave.....	200	
Racine Ave.....	150	
Clybourn Ave.....	150	
Kroger St.....	150	
Larrabee St.....	150	
Sedgwick St.....	150	
Clark St.....	50	
		1,200.00
Cash.....		60,371.59
Inter-Ocean bonds, 6 at \$500.....		3,000.00
Due from Merchants Loan & Trust Co.....		147.28
Due from City of Chicago.....		425.00
Total.....		\$489,489.66

A trial balance of the general ledger of the North Chicago City Railway Company on May 24, 1886, exhibits its financial condition as follows:

TRIAL BALANCE, MAY 24, 1886, NORTH CHICAGO CITY RY. CO.

Construction	\$908,324.78	Capital stock	\$500,000.00
Real estate	418,024.84	Bonds	1,247,000.00
Buildings	245,188.37	Bills payable	54,000.00
Cars	210,000.00	Accounts payable.....	25,001.96
Horses	169,100.00	Income account	228,275.69
Miscellaneous equipments ..	12,200.00		
Harness	8,625.00		
Wagons and buggies.....	650.00		
Hay	14,000.00		
Horseshoes and nails	1,500.00		
Stable account	1,550.00		
Tools	250.00		
Office furniture	500.00		
Supplies	420.79		
Inter-Ocean bonds	3,000.00		
Merchants' Loan & Trust Co	147.28		
City of Chicago	425.00		
Cash	60,371.59		
	\$2,054,277.65		\$2,054,277.65

A trial balance of the books of the North Chicago Street Railroad Company immediately after that company assumed control makes the following exhibit:

TRIAL BALANCE, MAY 24, 1886, NORTH CHICAGO ST. RAILROAD CO.

Liabilities of N. C. C. Ry. Co. assumed.....	\$79,001.96
Cash	60,371.59
Merchants' Loan & Trust Co.....	147.28
City of Chicago.....	425.00
Inter-Ocean bonds.....	3,000.00
	<hr/>
	\$142,945.83
Bills payable N. C. C. Ry. Co.....	\$54,000.00
Accounts payable N. C. C. Ry. Co.....	25,001.96
Income account.....	63,943.87
	<hr/>
	\$142,945.83

A comparison of the foregoing schedules shows that with the exception of the \$60,371.59 cash, \$147.28 due from the Merchants' Loan & Trust Company, \$425 due from the City of Chicago and the \$3,000 Inter-Ocean bonds, none of the property referred to in the inventory was transferred to or entered in the books of the new company. Neither was any entry made to represent the 44.774 miles of the road, nor the real estate, buildings, and equipment transferred under the lease. It is true, these properties did not form part of the permanent assets of the North Chicago Street Railroad Company, although the long lease of 999 years contemplated practically a complete transfer; neither did the items enumerated in the inventory, nevertheless, some of the items in the inventory are taken up, and, as will be seen above, the incompleteness of the entries necessitated a credit to Income Account of \$63,943.87 to balance the accounts, although the company had as yet derived no income from the use of the property.

An intelligent record of the transactions affected by or growing out of the lease required a debit entry on the books of the lessee company of a sum or sums representing either the book or appraised value of all the property of every description transferred, whether permanently or temporarily, and a corresponding entry representing the aggregate value of the property to the credit of the North Chicago City Railway Company to balance the account.

Sec. 3.—N. C. S. R. R. Co. Buys Controlling Interest.

On June 29, 1886, or one month following the lease, the directors of the North Chicago Street Railroad Company determined to

purchase 2,501 of the 5,000 shares of the North Chicago City Railway Company's capital stock and authorized the expenditure of \$1,500,600 for that purpose, or at the rate of \$600 per share (\$100 being par).

The actual purchase was not made until September 16, 1886, when the books of the North Chicago Street Railroad Company show the following entries:

Purchase of North Chicago City Railway Company stock, Dr.—

To Wm. L. Elkins and Peter A. B. Widener, for 2,501 shares of North Chicago City Railway Company stock as per resolution of Board of Directors passed June 29, 1886.....	\$1,500,600
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Immediately following this entry, and of the same date, is another showing that the credit to William L. Elkins and P. A. B. Widener was partially offset by the delivery to them of the first issue of bonds made by the North Chicago Street Railroad Company, viz.:

Wm. L. Elkins and Peter A. B. Widener, Dr.—

To bond account for 3,000 5 per cent 20-year \$500 mortgage bonds, dated July 1, 1886, issued in pursuance to resolution of Board of Directors, passed June 29, 1886.....	\$1,500,000
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According to the 1896 issue of the *Economist Street Railway Supplement*, these shares were only a short time previously purchased from Jacob Rehm, V. C. Turner and others by the United States Construction Company, from which Company they were evidently transferred to William L. Elkins and Peter A. B. Widener before delivery to the North Chicago Street Railroad Company as above noted.

On this subject the *Economist* says:

In March, 1886, Charles T. Yerkes and his Philadelphia associates purchased from Jacob Rehm 729 shares of the capital stock, from V. C. Turner and others represented by Mr. Turner, 1,772 shares, making a total of 2,501 shares of the 5,000 shares outstanding. The price was \$600 a share. The total payment of \$1,500,600 was made in cash at the Merchants' Loan & Trust Company March 23, 1886. The purchase was made in the name of the United States Construction Company.

There is nothing in the books of either the lessee or lessor company to confirm this statement. If true, it would seem to indicate that whatever profit there was in the deal accrued solely to the benefit of Jacob Rehm and V. C. Turner and those whom they represented, as the stock was turned over to the North Chicago Street Railroad Company by Elkins and Widener at the same price per share that Rehm and Turner received for it.

Sec. 4.—Contracts for Conversion to Cable Traction.

On May 24, 1886, the North Chicago Street Railroad Company entered into a contract with the United States Construction Company " * * * to construct and put in operation a cable line on Clark Street from at or near Kinzie street. to the Limits barn in Lake View." The United States Construction Company was also to secure for the railroad company the right to lay tracks on La Salle Street and Avenue between Illinois and Jackson streets, and on Illinois between Clark and Wells streets, and through the La Salle Street tunnel. No particular reference was made to a cable line on Wells Street, nor to the loop line on Monroe, Dearborn and Randolph streets, nor to the purchase of any land upon which to erect power houses. All of these matters seem to have been left to the judgment of the Construction company. Even the consideration to be paid the Construction company is uncertain, except that " * * * not less than \$4,500,000, payable in the stock of the said company * * [is named] * * provided the length of said North Chicago Street Railroad Company does not exceed 15 miles."

Under this contract 5.958 miles single track horse road on North Clark Street, from Wells Street to Diversey Street, were converted into cable road and likewise 3.543 miles single track on Wells Street from Illinois to the junction of Wells Street and North Clark Street.

The only cable line specifically referred to in the lease of May 24, 1886, was that to be constructed on North Clark Street, and whatever expense the North Chicago Street Railroad Company might incur in its construction was to be a charge against the North Chicago City Railway Company, to be liquidated only in the contingency of a termination of the lease at the end of or before the expiration of 999 years. In the event of any other cable road being constructed (the lease providing that this only could be done by mutual agreement), it was optional with the North Chicago Street Railroad Company to carry the expense as a charge against the lessor company, the same as in the case of the North Clark Street line; or it could require the lessor company to increase its outstanding bonded indebtedness to the extent of the sum expended for construction and deliver the new bonds to the lessee company by way

of reimbursement for its expenditures. In either case, however, the lease stipulated that " * * * for the purpose of perpetuating reliable evidence to be used in an equitable adjustment between the parties hereto * * * " an accurate account of the expenditures must be kept and into that account only must be charged " * * the actual cost of the improvements * * * ."

No such records are to be found in the books of the lessee company, and it does not appear upon what showing the directors of the lessor company consented to the issue of new bonds for such improvements as was the case several times subsequent to the transfer of the property to the lessee company. For example, on September 20, 1887, the lessee company entered into a contract with the United States Construction Company to cable Lincoln Avenue from Wrightwood Avenue to Center Street and Center Street from Lincoln Avenue to North Clark Street, forming a junction at that point with the cable road on North Clark Street, a total of 2.724 miles single track cable road. The contract also provided for the erection of a new power house at Wrightwood and Lincoln avenues, on land already owned by the North Chicago City Railway Company, on which was standing the car barn of that company. The consideration to be paid was \$500,000 in $4\frac{1}{2}$ per cent 40-year bonds of the North Chicago City Railway Company.

Three hundred of these bonds, representing \$300,000, were issued by the last-named company on May 1, 1888, and delivered to the United States Construction Company, and on February 21, 1889, 198 more bonds, representing \$198,000, were delivered, and \$2,000 in cash to complete the contract.

On January 25, 1890, a similar contract was made with the United States Construction Company to cable Clybourne Avenue from the terminus near Fullerton Avenue to Division Street and Division Street to the junction with the cable road on Wells Street at Division and Wells streets, a distance of 4.459 miles single track cable road. Nothing further was called for by this contract, the consideration being \$500,000 in $4\frac{1}{2}$ per cent bonds of the North Chicago City Railway Company.

By the terms of this contract the approximate cost of constructing a mile of cable road is obtained. Assuming that it required the full \$500,000 to complete the 4.459 miles of single track

referred to and omitting from consideration the 4,000 lineal feet of underground conduit on Division and Clark streets, connecting this section of road with the power house on Clark Street, the cost per mile would be \$112,132.77. As this assumption allows no profit for the Construction company, it cannot very well be under the actual cost, and, if taken as a basis for estimating the cost of the entire road, does no injustice to the management for that reason, since the absence of any other reliable data on the subject renders its adoption necessary.

At the same time, there is every reason to suppose that the cost originally estimated was \$425,000, with \$75,000 added for profit and risk, being a margin of nearly 20 per cent over the estimated cost, a percentage not infrequently adopted in estimating for contract work. This gives an estimated cost of \$95,000 per mile of single track, which is a little less than the actual cost per mile of the Blue Island Avenue, Halsted Street and Van Buren Street cable lines of the West Chicago Street Railroad Company.

An earnest endeavor has been made to induce the management of the North Chicago Street Railroad Company to produce the books of the United States Construction Company for examination, but without success, as fully explained elsewhere in this report. The necessity for some definite information concerning the actual cost of the work done by the United States Construction Company is so obvious that, in the absence of the books referred to, an estimate of the cost of the whole road based upon certain parts, the cost of which is known, would seem to be warranted and fair.

Certainly no injustice will be done the management of the North Chicago Street Railroad Company if, in adopting the sum of \$112,132.77 as the average cost per mile of the entire North Side cable road, it should subsequently appear that the amount actually paid the Construction company was greatly in excess of that price. On the contrary, when it is considered that the sum mentioned is \$6,000 per mile greater than the cost of a precisely similar road on Blue Island Avenue, Halsted Street and Van Buren Street, including the Adams Street loop, both being built from practically the same specifications, and that it is \$30,000 per mile greater than the first experimental section of cable road ever built in Chicago, being the lines on State Street and Wabash and Cottage Grove avenues,

north from Thirty-ninth street, including the downtown loop, constructed nearly ten years earlier than the cable road on the North Side; and \$50,000 per mile greater than the subsequent extensions of the South Side cable lines, completed about the same time as the North Clark and Wells Street lines, and even \$50,000 per mile greater than the track construction of the Van Buren Street tunnel, it is difficult to see how any suspicion of unfairness to the railroad management can attach to the sum selected for the purpose specified, particularly as the management has created the necessity for its selection by not producing the records which the lease of May 24, 1886, explicitly stipulated should be preserved.

In addition to the 16.684 miles single track cable road already referred to as having been constructed by the North Chicago Street Railroad Company, for the account of the North Chicago City Railway Company, there was also constructed the La Salle, Monroe, Dearborn and Randolph streets loop of 1.626 miles single track, making a total of 18.310 miles single track cable road built by the United States Construction Company at an estimated aggregate cost of \$2,053,151.00, or at the rate of \$112,132.77 per mile.

On January 12, 1887, a contract was entered into with the United States Construction Company to build 11.385 miles single track new horse road, cost of which I have estimated at \$255,914.99, or \$22,478.26 per mile, being the same rate per mile as the actual cost for similar road built by the North Chicago Street Railroad Company about the same time, viz.: 11.682 miles single track at \$22,478.26 per mile, or an aggregate of \$262,591.03.

In addition thereto the lessee company built 3.626 miles single track new electric road at \$20,530.15 per mile, and converted 22.280 miles single track horse road into electric road at \$14,428.15 per mile, and 28.173 miles at \$20,530.15 per mile, making a grand total of \$3,740,926.65 expended for track, including \$115,885.61 for miscellaneous paving and \$79,001.96 old floating debt assumed for account of the North Chicago City Railway Company

Under the contract of May 24, 1886, the United States Construction Company erected two cable power houses—one on Clark Street, between Elm and Maple streets, and one on Illinois Street, corner La Salle Avenue. The one erected at Clark Street and Elm Street is on property belonging to the North Chicago City

Railway Company. Four engines of 500 horse-power each were originally installed at this power house.

Now the most expensive cable power house in the city is that which operates the Blue Island Avenue and Halsted Street cable system on the West Side, the machinery in which cost \$173,240.47. The engines are 3,600 horse-power. The machinery in the Van Buren Street power house cost \$116,627.53, and the engines are 2,600 horse power. At the same rate of decrease in cost per horse power, the cost of the machinery at the Clark Street power house would be \$84,659.79, or \$42 per horse-power.

The cost of the Van Buren Street power house was \$142,326.44 and that of the Blue Island Avenue power house \$233,290.50, both including the land as well as the buildings, whereas the land on which the Clark Street power house is erected was already owned by the North Chicago City Railway Company. A fair estimate of the cost of the building, therefore, would not exceed \$50,000, or \$135,000 for the building and machinery, and \$200,000 for the land, building and machinery at Illinois Street and La Salle Avenue.

The contract of September 20, 1887, for the Lincoln Avenue cable also provided for the erection of a power house at Lincoln and Wrightwood avenues. The contract price for the cable road and power house was \$500,000. At \$112,132.77 per mile for the 2,724 miles of single track cable road would leave \$194,550.33 to cover the cost of the power house and machinery, and allow for the profit of the United States Construction Company. As the land on which the power house is erected was already owned by the North Chicago City Railway Company, if 10 per cent, or \$50,000, is deducted for profit, the balance, \$144,550.33, would seem to be a fair estimate of the cost of the power house and machinery.

The contract of January 12, 1887, in addition to providing for the construction of 11.385 miles of single track horse road, required the construction of a brick barn adjoining the Clark Street power house, the cost of which was approximately \$75,000, the land being owned already by the North Chicago City Railway Company. It also required the removal of the Wells Street bridge to Dearborn Street and the erection of a new four-track iron bridge at Wells Street. The contract of May 24, 1886, also required the erection of a new four-track iron bridge at Clark Street.

The cost of these bridges was as follows: Clark Street, \$132,375; Wells Street, \$145,750; total, \$278,125.

Sec. 5.—Cost of Reconstruction.

This completes all the expenditures made for account of the North Chicago City Railway Company down to December 31, 1897, and includes the cost of all construction done by the United States Construction Company on the North Side, viz:

18.31 miles cable road, at \$112,132.77.....	\$2,053,151.00
11.385 miles horse road, at \$22,478.26.....	255,914.99
Clark street power house and machinery.....	135,000.00
Illinois street power house and machinery.....	200,000.00
Lincoln avenue power house and machinery.....	144,550.33
Clark street barn.....	75,000.00
Clark and Wells street bridges.....	278,125.00

Total..... \$3,141,741.32

For these improvements the United States Construction Company has received \$4,500,000 in the capital stock of the North Chicago Street Railroad Company, \$998,000 in 4½ per cent bonds of the North Chicago City Railway Company, and \$710,908.39 in cash from the North Chicago Street Railroad Company—a total of \$6,208,908.39, or \$3,067,167.07 in excess of the approximate cost of the betterments furnished.

The improvements paid for by the North Chicago Street Railroad Company direct, without the intermediation of a construction company, were as follows:

11.682 miles new horse road, at \$22,478.26.....	\$262,591.03
3.626 miles new electric road, at \$20,530.15.....	74,442.32
28.173 miles electric road converted from horse road, at \$20,530.15.....	578,395.92
22.280 miles horse road, at \$14,428.15.....	321,543.82
Real estate improvements.....	214,865.79
Miscellaneous paving.....	115,885.61

Miscellaneous—

Electric light LaSalle street tunnel.....	\$3,200.00
Dearborn street bridge.....	2,934.00
Wells street bridge.....	779.40
Clark street cable station.....	9,314.29
LaSalle avenue cable station.....	21,990.46
Cable shears.....	340.00
Elm street station.....	2,143.00
Lincoln avenue station.....	1,353.12
Pumping station LaSalle street tunnel.....	764.17
Nast Splicing system.....	3,000.00
Loop alterations.....	8,854.84

54,673.28

Lincoln avenue renewal.....	\$8,496.77	
Limits loop	3,527.00	
		12,023.77
		<u>\$1,634,421.54</u>

making a grand total of \$4,776,162.86.

To this should be added the \$79,001.96 old floating debt of the lessor company assumed and paid by the lessee company, and the \$3,067,167.07 profit of the United States Construction Company on the several contracts for construction, making the total expenditures of the lessee company for account of the lessor company \$7,922,331.89. In part payment the lessor company has issued \$1,750,000 in bonds, leaving a balance of \$6,172,331.89 still due lessee company on December 31, 1897.

Sec. 6.—Original Cost of Horse Road.

The mileage of this road on May 24, 1886, was 44.774 miles single track horse railroad, and cost, according to the books of the company, \$908,324.78, or an average of \$20,286.88 per mile.

Of the original road there still remains unchanged 0.153 miles horse railroad, representing an original cost value of \$3,103.89.

The remaining 44.621 miles single track have been converted into cable and electric road, as follows: 16,448 miles into cable at \$112,132.77, \$1,844,359.80; 28.173 miles into electric at \$20,530.15, \$578,395.92. Since the lease of May 24, 1886, the following road has been built: 1.862 miles new cable at \$112,132.77, \$208,791.20; 23.067 miles horse at \$22,478.26, \$518,506.02. Of the 23.067 miles single track new horse road 22.28 miles were subsequently converted into electric road at \$14,428.15 per mile, or \$321,543.82 in the aggregate. The remaining 0.787 miles is still unchanged as horse railroad.

In addition to the foregoing road 3.626 miles single track new electric road were built at \$20,530.15 per mile, or \$74,442.32 in the aggregate, making a grand total of \$4,454,363.86, recapitulated as follows:

44.774 miles original horse road, at \$20,286.88.....	\$908,324.78
16.448 miles original horse road converted into cable, at \$112,132.77....	1,844,359.80
23.067 miles new horse road, at \$22,478.26.....	518,506.02
28.173 miles original horse road converted into electric, at \$20,530.15...	578,395.92
22.280 miles new horse road converted into electric, at \$14,428.15.....	321,543.82
1.862 miles new cable, at \$112,132.77.....	208,791.20
3.626 miles new electric, at \$20,530.15.....	74,442.32
	<u>\$4,454,363.86</u>

Sec. 7.—Original Cost of Present Assets.

Of the above road there was still existing on December 31, 1897, the following:

18.310 miles cable, at \$112,132.77.....	\$2,053,151.00
22.280 miles electric, at \$14,428.15.....	321,541.82
31.799 miles electric, at \$20,530.15.....	652,838.24
22.280 miles paving relaid when road was converted from horse to electric.....	115,885.61
0.153 miles horse road, at \$20,286.88.....	3,103.89
0.787 miles horse road, at \$22,478.26.....	17,690.39
<hr/> 73.329 miles	<hr/> \$3,164,212.95

showing a total depreciation amounting to \$1,290,150.91.

In the case of the 54.079 miles single track electric road in the above schedule, a large amount of the pavement already down was relaid when the road was converted from horse to electric road. The original cost value of such pavement was \$135,952.80, and by being relaid became incorporated into the cost value of the new electric road.

The following schedule shows the distribution of the cost value of the 54.079 miles single track electric road of the North Chicago City Railway Company on December 31, 1897:

Overhead and underground electric construction.....	\$405,555.19; per mile,	\$7,499.31
Paving	329,990.30; per mile,	6,102.00
Steel rails, 85 lbs.....	226,906.89; per mile,	4,194.29
Miscellaneous material and labor.....	147,882.48; per mile,	2,734.55
	<hr/> \$1,110,334.86	<hr/> \$20,530.15

The distribution of the cost of paving was as follows:

Granite	30,521	square yards, at \$2.00,	\$61,041.44
Cobble	161,933	square yards, at 1.25,	202,415.99
Brick	8,626	square yards, at 1.60,	13,802.14
Wood	52,731	square yards, at 1.00,	52,730.73
<hr/> Total.....	<hr/> 253,811	<hr/> square yards,	<hr/> \$329,990.30

These schedules include the \$135,952.80 of pavement relaid.

According to the lease of May 24, 1886, the personal property of the North Chicago City Railway Company turned over to its successor stands as a charge against the latter at the appraised value agreed upon, to-wit: \$489,489.66.

The real estate and buildings existing at the time of the lease, representing an original cost value of \$245,188.37 and \$418,024.84 respectively, have also to be accounted for.

On the other hand, the lessee company has expended for miscellaneous improvements for account of the lessor company, from

May 24, 1886, to December 31, 1897, the sum of \$281,562.84 and \$278,125.00 for the Clark and Wells Street bridges, for which it is entitled to credit under the terms of the lease.

It has also made the following special expenditures for account of the lessor company, viz:

Lincoln avenue power house and machinery.....	\$144,550.33
Clark street power house and machinery.....	135,000.00
Illinois street power house and machinery.....	200,000.00
Clark street barn.....	75,000.00
Total.....	\$554,550.33

To recapitulate, there existed on December 31, 1897, the following assets:

73.329 miles single track road.....	\$3,184,280.14
Real estate	245,188.37
Buildings	1,187,440.96
Personal property per inventory.....	489,489.66
Total	\$5,106,399.13 ¹

Sec. 8.—Resume of Assets and Liabilities.

The outstanding liabilities on December 31, 1897, were as follows:

Capital stock	\$500,000.00
First mortgage 6 per cent. bonds.....	500,000.00
Consolidated 4½ per cent. mortgage bonds.....	2,497,000.00
Due North Chicago Street Railroad Company for expenditures for betterments.....	6,172,331.89
	\$9,669,331.89

showing an excess of \$4,562,932.76 over the cost value of the existing property.

As this cost value is only \$2,109,399.13 in excess of the outstanding bonds which are the first lien against the property, it will be seen that there is a loss of \$4,062,932.76 on the claim of the North Chicago Street Railroad Company, and nothing in the way of tangible property to secure the stockholders.

¹ In strict accordance with the contract, the item, "Personal property per inventory, \$489,489.66," is an asset, but when ascertaining the *net* assets of both companies this item should be excluded, as the property is now in the possession of the North Chicago Street Railroad Co. and is included in its assets. Thus the original cost of the property now actually possessed by the N. C. C. Ry. Co. is \$4,616,909.47.

EXHIBIT III.—NORTH CHICAGO STREET RAILROAD CO.

Sec. 1.—Early Operations.

This company was incorporated May 18, 1886. Six days later, or on May 24, 1886, it entered into an operating agreement or lease with the North Chicago City Railway Company, the full particulars of which are given under the head of North Chicago City Railway Company. (See Exhibit II., Sections 1 and 2.) The consideration to be paid by the lessee company was \$37,500 on the first day of July, 1886, and the same amount quarterly during the continuance of the agreement, being in the nature of a guaranteed dividend of 30 per cent. per annum on the capital stock of the lessor company. In addition, the lessee company agreed to guarantee the interest of all bonds and mortgages of the lessor company then existing or which might thereafter be created, and to pay a bonus of \$500,000 in cash or capital stock of the lessee company.

One June 29, 1886, the board of directors of the North Chicago Street Railroad Company authorized the purchase of 2,501 shares of the capital stock of the lessor company at \$600 per share, or \$1,500,600 in the aggregate, and, in order to provide the funds with which to make the purchase, decided to issue first mortgage 5 per cent. bonds dated July 1, 1886, in the sum of \$1,500,000, to be partly secured by the deposit in trust of 2,501 shares of stock referred to. On September 16, 1886, the bonds, which run to William L. Elkins, were issued to William L. Elkins and Peter A. B. Widener, from whom the 2,501 shares are presumed to have been received in exchange the same day.

Thirteen months later, or on November 18, 1887, the board of directors of the North Chicago Street Railroad Company passed a resolution reciting that "Whereas, the stockholders of the said North Chicago City Railway Company desire said payment," referring to the \$500,000 bonus to be paid under the lease or operating agreement of May 24, 1886, " * * * to be made in the stock of this company and not in cash; resolved, that the Treasurer purchase 5,000 shares and deliver the same."

According to an official "History of the Yerkes System of Street Railways in the City of Chicago," page 33, I find the following reference to this payment: "As a further consideration for

the lease, the stockholders of the North Chicago City Railway Company received stock in the new company to an amount equal to the par value of their holdings in the old company." As 2,501 shares of the old company, entitling the owner to a like number of shares in the new company in accordance with the above division, were at that time deposited with the Fidelity Insurance, Trust & Safe Deposit Company of Philadelphia, in trust for the benefit of the North Chicago Street Railroad Company, it would seem that part of the stock proposed to be divided would revert to the last-named company. This was not the case, however, notwithstanding the following entry in the books of the company under date of June 15, 1888, which shows that the full \$500,000 was distributed, viz:

Operating agreement with North Chicago City Railway Company, Dr.—

To cash United States Construction Company for 5,000 shares of the capital stock of North Chicago Street Railroad Company, at par, purchased as per resolution of Board of Directors, passed November 18, 1887, for the purpose of issue to stockholders holding dividend certificates issued by the North Chicago City Railway Company to its stockholders in lieu of the \$500,000 to be paid them by this company, as per operating agreement, dated May 24, 1886. \$500,000.00

I can find no record in the book of account of the North Chicago City Railway Company of the issue of \$500,000 in dividend certificates by that company, although such may have been done after the books were turned over to the lessee company on May 24, 1886, and no record made.

Sec. 2.—Bonds Issued as Dividends.

In examining the accounts prior to May 24, 1886, I find that several large dividends were paid in bonds. For example, in December, 1884, a dividend of \$250,000 was declared, payable in bonds, being 50 per cent. on the capital stock of the company. In December, 1882, another dividend of \$250,000 was declared, payable in bonds, and during the same month what purports to be a sale of \$250,000 more bonds was in reality another dividend of \$250,000, making \$750,000 in dividends paid in bonds. During 1882 dividends amounting to 107 per cent. were paid.

Of the \$1,247,000 bonds of the North Chicago City Railway Company outstanding at the time of the lease of the road to the North Chicago Street Railroad Company, all but \$497,000 were

issued as dividends to stockholders, and I am of the impression that still another dividend in bonds was paid prior to January 1, 1881, but, as the first ledger of the company cannot be found, although other books of the original set are still in the possession of the lessee company, I am unable to confirm the impression, if at all, except by laborious work in reconstructing a new ledger from such data as I may be able to find in other books and records.

The resolution of the board of directors of the North Chicago City Railway Company of November 2, 1882, in reference to the bond dividend of 1882, authorized "50 per cent. on capital stock, payable in 6 per cent. \$1,000 bonds and convertible certificates bearing date of November 1st, 1882." The bonds being for an even thousand dollars each, it became necessary to issue both bonds and convertible certificates to each shareholder. For example, L. S. Buckingham is charged with having received \$10,000 in bonds and a convertible certificate for \$800 on December 4, 1882, being 50 per cent. of the stock standing in his name, to-wit: \$21,600. The bonds issued were numbered 1 to 10 inclusive. Bond 21 went to E. Buckingham, as also bonds 23 to 25, inclusive. On December 5, 1882, bonds 26 to 28, inclusive, are recorded as having been given to Martha J. Marble; bonds 32 to 34, inclusive, and 38 to Annie G. Moore, and 39, 40 and 43 to Julia F. Porter. In the same manner 250 bonds were issued during the month of December, 1882, the highest number being 471, issued to Mary H. Jones on December 30, 1882. All of these bonds were charged to dividend account.

On precisely the same dates during the month, and to the same persons, the records show there was sold for cash an exactly even sum in bonds and convertible certificates, and the remarkable part of it is that every stockholder seemed to be of an even disposition financially, immediately purchasing an additional bond and certificate for each bond and certificate given to him or her as a dividend.

There was apparently no condition requiring a stockholder to purchase a \$1,000 bond before he could be paid his dividend of that amount; nevertheless in the issue of the 500 bonds there was undoubtedly an understanding between the company and the shareholders beforehand of some kind, as there is no break in the bond numbers issued when the \$250,000 dividend and alleged sale of \$250,000 in bonds are taken together. For example, L. S. Buck-

ingham is charged with receiving bonds 1 to 10, inclusive, and a certificate for \$800, on December 4, 1882, as a dividend, and on the same date is credited with having paid the company \$10,000 for bonds 11 to 20, inclusive, and \$800 for another certificate of that amount. In the same manner E. Buckingham received bond 21 and a certificate for \$700 as a dividend, and bond 22 and a certificate, also for \$700, in exchange for \$1,700 in cash, and so on throughout the list of shareholders.

It is unfortunate that the ledger prior to January 1, 1883, is missing, as it would throw considerable light on the subject.

Sec. 3—Stock Speculations.

The original capital stock of the North Chicago Street Railroad Company was \$5,000,000 subscribed for as follows:

United States Construction Company.....	49,990 shares
C. T. Yerkes.....	2 shares
Hiram Crawford	2 shares
Andrew Crawford	2 shares
Wm. D. Meeker.....	2 shares
W. L. Elkins.....	2 shares
Total.....	50,000 shares

This stock was paid for entirely by the United States Construction Company, as follows: On October 15, 1886, the board of directors passed the following resolution:

WHEREAS, the United States Construction Company has made a demand for a payment of \$1,500,000 on account of the contract made between these two companies on the 24th of May, 1886; therefore be it

RESOLVED, That the said payment is hereby ordered and made payable on the 25th day of October, 1886.

On October 25, 1886, or the date mentioned, construction account is debited \$1,500,000 and the above-named subscribers credited with having paid the same aggregate amount, or 30 per cent. of their subscriptions. On January 10, 1887, another payment to the United States Construction Company is authorized, amounting to \$1,000,000, and on January 12, 1887, another credit amounting to 20 per cent. is given on the above subscriptions. On April 11, 1887, another payment of \$1,250,000 is ordered made to the United States Construction Company, and, on the same day, 25 per cent. of the stock subscription is credited to the subscribers.

In the meantime, the United States Construction Company had undertaken a new contract for \$750,000, that of January 12, 1887,

fully explained elsewhere, and on August 23, 1887, received the first payment thereon on account, the funds with which to make the payment being the proceeds of three notes negotiated as follows:

August 15, 1887, Commercial National Bank.....	\$250,000
August 23, 1887, Illinois Trust & Savings Bank.....	150,000
August 23, 1887, C. T. Yerkes.....	100,000
Total.....	\$500,000

On November 18, 1887, another payment of \$500,000 was ordered made to the United States Construction Company on account of the original cable contract of May 24, 1886, and on November 21, 1887, the last two payments, aggregating \$1,000,000, were credited on the above subscriptions, completing all except \$250,000 due the United States Construction Company, which last amount was paid February 27, 1888, by a final resolution of the board of directors authorizing the payment of a like sum to the Construction company in final settlement of the contract of May 24, 1886.

It will be noticed that prior to January 12, 1887, only 30% had been paid on account of the capital stock and that half of the total amount due remained to be paid after that date; nevertheless it would seem that the stock had already been delivered to the United States Construction Company, for, on January 12, 1887, when the second payment (\$1,000,000) is credited to the United States Construction Company on account of its subscription, making a total of \$2,500,000, a dividend of $2\frac{1}{2}$ per cent. on \$3,000,000, or \$75,000, was paid to George D. Widener, Treasurer of the United States Construction Company. Considering that only \$1,500,000 had been with the company from October 25, 1886, to the date of the dividend, or January 12, 1887, 2 months and 17 days, the dividend was actually at the rate of 24 per cent. per annum on the sum paid in.

The dividend referred to was the first one declared by the North Chicago Street Railroad Company and amounted in the aggregate to \$125,000, or $2\frac{1}{2}$ per cent. on the entire capital stock of the company. Another dividend of $2\frac{1}{2}$ per cent. was declared June 22, 1887, and one of 3 per cent., or \$150,000, was declared December 22, 1887, all before the capital stock was fully paid for, and, presumably, before any of it had been delivered to the subscribers.

Particular attention is called to the fact that it was not until June 15, 1888, that there was any distribution of the \$500,000 in stock of the new company among the stockholders of the old company, and such may have been the case; nevertheless, I find that the first dividend paid by the new company, that of January, 1887, was distributed as follows:

		Dividends.	Being 2½ per cent. on
Jan. 11, 1887,	C. L. Hutchinson.....	\$500.00	\$20,000
Jan. 12, 1887,	Geo. D. Widener, Treas. U. S. Con. Co.....	75,000.00	3,000,000
Jan. 14, 1887,	Chas. H. Ferry, Trustee.....	37.50	1,500
Jan. 14, 1887,	C. A. Spring, Jr.....	50.00	2,000
Jan. 15, 1887,	Chas. B. King.....	150.00	6,000
Jan. 15, 1887,	Andrew Nelson.....	120.00	4,800
Jan. 15, 1887,	Geo. E. Adams.....	170.00	6,800
Jan. 15, 1887,	Adele F. Adams.....	67.50	2,700
Jan. 15, 1887,	Nancey S. Foster.....	250.00	10,000
Jan. 15, 1887,	Julia F. Porter.....	125.00	5,000
Jan. 15, 1887,	S. M. James.....	250.00	10,000
Jan. 15, 1887,	T. S. Phillips.....	125.00	5,000
Jan. 15, 1887,	Mary H. Jones.....	125.00	5,000
Jan. 15, 1887,	Wm. N. Phillips.....	125.00	5,000
Jan. 15, 1887,	Mrs. Annie G. Moore.....	125.00	5,000
Jan. 17, 1887,	Eliza V. Rumsey.....	5.00	200
Jan. 17, 1887,	M. F. Blair, Chauncy J. Blair, Cyrus H. Adams, Trustees.....	252.50	10,000
Jan. 18, 1887,	Lorenzo G. Woodhouse.....	62.50	2,500
Jan. 20, 1887,	I. N. Maynard.....	90.00	3,600
Jan. 22, 1887,	Mrs. R. McM. Gillespie.....	215.00	12,600
Jan. 25, 1887,	Mrs. Sarah Morris.....	37.50	1,500
Jan. 26, 1887,	Edward Waller.....	112.50	4,500
Jan. 27, 1887,	Chas. T. Yerkes.....	80.00	3,200
Jan. 27, 1887,	Hiram Crawford.....	12.50	500
Jan. 27, 1887,	Robt. Macfeely.....	137.50	5,500
Feb. 1, 1887,	E. M. Mayo.....	125.00	5,000
Feb. 1, 1887,	Clara C. Hollis.....	62.50	2,500
Feb. 5, 1887,	P. A. B. Widener.....	190.00	7,600
Feb. 5, 1887,	W. L. Elkins.....	192.50	7,700
Feb. 5, 1887,	Geo. D. Widener, Treas.....	1,230.00	49,200
Feb. 25, 1887,	W. R. Willing.....	77.50	3,100
Mch. 12, 1887,	J. J. Mitchell, Pres.....	250.00	10,000
Mch. 15, 1887,	S. B. Cobb.....	50.00	2,000
Mch. 19, 1887,	Thos. Howard.....	250.00	10,000
Mch. 23, 1887,	Chas. H. Ferry.....	17.50	700
Mch. 23, 1887,	Mary A. W. Ferry.....	30.00	1,200
Apr. 15, 1887,	Robt. Glendening.....	125.00	5,000
Apr. 30, 1887,	P. A. B. Widener.....	2,085.00	83,400
Apr. 30, 1887,	W. L. Elkins.....	2,085.00	83,400
Apr. 30, 1887,	C. T. Yerkes.....	2,082.50	83,300
May 2, 1887,	U. S. Construction Co.....	37,500.00	1,500,000
May 27, 1887,	Mary A. W. Ferry, Trustee.....	25.00	1,000
July 1, 1887,	W. C. Goudy.....	5.00	200
July 1, 1887,	Jno. Doe.....	217.50	8,700
July 1, 1887,	Clara F. Bass.....	67.50	2,700
July 1, 1887,	L. M. Ferry.....	7.50	300
Totals.....		\$125,000.00	\$5,000,000

As before stated, there is no record that any of the capital stock was distributed among the stockholders of the old company until June 15, 1888, and it may be merely a coincidence that 22 out of the 46 names in the above list were stockholders in the old company, and held just one-half the number of shares in the old company that they are credited with above; nevertheless, the fact that these names appear at all among the stockholders of the new company and receiving dividends before the stock was fully paid for, and all payments being made credited to other persons, would indicate, at least, that the stock had been issued prematurely, and was being trafficked in before the United States Construction Company had a clear paid-up title to it.

The issue of the stock to the United States Construction Company before being earned by the North Chicago Street Railroad may likewise have a very important bearing in deciding the question as to whether or not the same thing was done on the West Chicago Street Railroad Company, as may be inferred from a consideration of that subject elsewhere in this report.

Sec. 4.—Total Expenditures.

The total expenditures of this company from May 24, 1886, to December 31, 1897, outside of operating expenses, were \$16,797,520.97, divided as follows:

For betterments on account North Chicago City Ry. Co.....	\$7,922,331.89
For 2,501 shares of stock North Chicago City Ry. Co.....	1,500,000.00
Bonus paid to shareholders North Chicago City Ry. Co.....	500,000.00
Total on account of North Chicago City Ry. Co.....	\$9,922,931.89
Balance on its own account.....	6,874,589.08
Total	\$16,797,520.97

The details of its expenditures on its own account are as follows:

10.713 miles S. T. new horse road at.....	\$22,478.26	\$240,809.60
10.713 miles S. T. new horse road converted into electric road at.....	14,428.15	154,597.67
12.014 miles S. T. new electric road at.....	20,311.13	244,017.92
Buildings		448,463.77
Land		199,958.20
Equipment		836,651.65
Car machinery (on hand Dec. 31, 1897).....		13,031.19
Grip car tools, "		1,068.87
Stationary registers, "		12,590.84

CHICAGO STREET RAILWAYS.

541

Horses,	"	9,820.02
Supplies,	"	32,920.81
Bonds,	"	1,399,650.00
Stocks,	"	10,500.00
Bills receivable,	"	1,897,400.00
Accounts receivable,	"	221,520.61
Cash and cash items,	"	554,225.16
Suspense,	"	22,092.58
Railway expenses to Dec. 31, 1897.....		250,099.41

Miscellaneous items charged into construction account:

Car Heaters.....	8,373.78	
Building repairs.....	758.44	
Car repairs.....	3,800.00	
Wagon for Fire Apparatus.....	160.00	
Gas and Water Rent.....	531.28	
Water Pipe.....	67.79	
Patent Cases.....	875.00	
Love Traction Co.....	7,656.27	
Discount on Bonds.....	35,315.00	
Frontage	10,679.35	
City Inspection.....	1,338.75	
Hose Bridge and Lift.....	456.10	
Garfield Barn fire.....	8,036.63	
Contributions	2,000.00	
Chicago Times.....	144.00	
Printing	20.81	
Legal Expenses.....	2,257.06	
Electric light.....	52.80	
Gas pipe line.....	4,260.93	
Wells Street improvements.....	1,980.76	
Horse depreciation.....	80,000.00	
Corn depreciation.....	6,437.03	
Loan to Garden City Construction Co.....	150,000.00	
		<u>325,210.78</u>

Total \$6,874,589.08

The details of the disbursements for buildings were as follows:

Hobbie St. electric power house, at Hawthorne Ave. and Hobbie St....	\$377,480.80
High Ridge car house, at N. Clark St., near Homan Ave.....	6,363.38
Halsted St. car barn, at Lincoln Ave., near Halsted St.....	16,351.68
La Salle Ave. station.....	7,857.59
Graceland Ave. car house.....	28,675.87
Sheffield Ave. machine shops.....	6,041.60
Lincoln and Sheffield Ave. waiting room.....	5,692.85

Total \$448,463.77

The pieces of land purchased by the company between May 24, 1886, and December 31, 1897, were (1) site of Hobbie Street power house, (2) site of Halsted Street barn, (3) site of machine shop on Sheffield Avenue north of Fullerton Avenue. These pieces are represented by the item, "Land, \$199,958.20," in the above schedule. The company has purchased other pieces of land, but the sum paid in each case is carried in the cash balance of \$554,225.16 as a cash item on hand December 31, 1897. The pieces

referred to are: Site High Ridge car house; one lot, Larrabee Street; site Graceland Avenue car house, Graceland and Southport; 386 and 390 Dearborn Avenue; Belleplaine and Lincoln Avenues; loop, Sheffield and Lincoln avenues.

In converting the 10.713 miles single track horse road into electric road, the old street pavement then down, being practically new, was relaid. The original cost value of this pavement was \$63,024.36 and is incorporated into the total cost value of the existing 22.727 miles single track electric road now owned by the N. C. S. R. R. Co. The detailed cost of this section of road (22.727 miles) is as follows:

		Per Mile.
Overhead and underground electrical construction.....	\$170,435.81	\$7,499.31
Paving	133,702.51	5,882.98
Rails, 85 lbs.....	95,323.63	4,194.29
Miscellaneous material and labor.....	62,148.00	2,734.55

Totals	\$461,609.95	\$20,311.13
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The distribution of the cost of paving was as follows:

Granite, 18,956.36 Sq. yards, at \$2.00.....	\$37,912.72
Wood, 55,386.44 Sq. yards, at 1.00.....	55,386.44
Cobble, 32,322.52 Sq. yards, at 1.25.....	40,403.35

Totals...106,665.32	\$133,702.51
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Sec. 5.—Original Cost of Present Assets.

The cost value of the property owned by the North Chicago Street Railroad Company and existing on December 31, 1897, was as follows:

22.727 miles S. T. electric road, at \$20,311.13.....	\$461,609.95
Real estate.....	199,958.20
Buildings	448,463.77
Equipment:	
182 Box cars, at.....	\$900
39 Box cars, at.....	700
4 Box cars, at.....	500
222 Open cars, at.....	725
64 Open cars, at.....	500
73 Grip cars, at.....	650
141 Box motor cars, at.....	1,000
130 Open motor cars, at.....	825
3 Mail motor cars, at.....	900
16 Sweepers, at.....	300
11 Snow plows, at.....	400
12 Salters, at	200
6 Sprinklers, at.....	250
29 Other vehicles, at.....	300
	<u>8,700</u>
	625,775.00

CHICAGO STREET RAILWAYS.

543

Car machinery.....		13,021.19
Grip car tools.....		1,068.87
Stationary registers.....		12,590.84
Horses		9,820.02
Storehouse supplies.....		32,920.81
Wagon for fire apparatus.....		160.00
Due from Garden City Construction Co.....		150,000.00
Cash and cash items.....		554,225.16
Bonds:		
N. Chi. City Ry. 4½ per cent.....	\$110,000	
N. Chi. St. R. R. 5 per cent.....	10,000	
N. Chi. St. R. R. debentures.....	532,900	
Chi. Passenger Ry. Co.....	714,000	
First Regiment.....	2,000	
Dubuque Building.....	4,750	
Times-Herald	25,000	
Garfield Building.....	1,000	
		<u>1,399,650.00</u>
Stocks:		
Ferris Wheel.....	\$10,000	
N. Chi. St. R. R.....	500	
		<u>10,500.00</u>
Bills Receivable:		
W. P. Nixon, 12/19/91.....	6,300	
J. J. West, 2/14/89.....	16,000	
Chas. Henrotin, 4/9/92.....	40,000	
Ed. Koch, 10/29/92.....	15,000	
Electric Park Am. Co., 5/7/96.....	50,000	
Columbian Const'n Co., 3/9/97.....	50,000	
J. R. Bickerdike, 7/29/97.....	10,000	
West Chi. St. R. R., 8/31/97.....	25,000	
" " 11/10/97.....	100,000	
" " 12/10/97.....	10,000	
" " 12/10/97.....	10,000	
" " 12/10/97.....	15,000	
" " 11/15/97.....	50,000	
West Chi. St. R. R. Tunnel Co.....	1,500,000	
		<u>1,897,400.00</u>
Accounts receivable		221,520.61
Suspense		22,092.58
		<u>\$6,060,777.00</u>

showing a depreciation of \$813,912.08, to which should be added \$500,000 paid to the stockholders of the North Chicago City Railway Company, and the \$1,500,600 paid for the 2,501 shares of stock of the same company, since it is shown elsewhere that the property of that company on December 31, 1897, was only \$2,109,399.13 in excess of its outstanding bonds, and which excess is not sufficient to secure the claim of the North Chicago Street Railway Company for \$7,922,331.89. The stock, therefore, in case of a termination of the lease and settlement between the companies

according to the express terms of the lease, has no secured value.

Adding the amount collectible from the lessor company (\$2,109,399.13) to the cost value of the other property of the lessee company (\$6,060,777.00) makes the total assets of the lessor company \$8,170,176.13.

Sec. 6.—Present Liabilities.

Against this there are outstanding liabilities as follows:

First mortgage 5 per cent. bonds.....	\$3,171,000.00
Debenture bonds, 6 per cent.....	1,260,000.00
Certificates of indebtedness, 6 per cent.....	500,000.00
Real estate mortgage (assumed).....	15,000.00
Bills payable.....	2,370,200.00
Conductors' and drivers' deposits.....	22,274.00
Employees' deposits.....	42,209.00
Dividends unpaid.....	325.00
Wages unpaid.....	125.22
Coupons unpaid.....	15,515.00
Accounts payable.....	10,946.86

Total \$7,407,595.08
leaving \$762,581.05 to secure the \$6,600,000 outstanding capital stock of the company.

Sec. 7.—Stock, Bonds and Dividends.

The capital stock of this company was originally \$5,000,000, and the first issue of bonds \$1,500,000. The circumstances in regard to the issue and disposition of these particular securities have already been fully set forth on a preceding page.

The mortgage under which the bonds were issued provides that additional bonds may be issued from time to time for new construction, but only to the extent of 75 per cent. of the actual cost of the new construction. Under this provision \$227,000 new bonds were issued in 1887, \$100,000 in 1888, \$523,000 in 1889, \$63,000 in 1890 and \$758,000 in 1896, a total of \$3,171,000, including the original issue of \$1,500,000. These bonds are dated July 1, 1886, mature January 1, 1906, and bear 5 per cent. interest.

By resolution of the board of directors December 8, 1890, there were issued on January 21, 1891, \$500,000 debentures maturing January 1, 1911, and bearing 6 per cent. interest. Additional debentures were issued in '95 and '96, maturing January 1, 1915, and bearing 6 per cent. interest, amounting in the aggregate to \$1,260,000.

The first lot, \$500,000, issued in 1895, was used as collateral security for loans to the company. On January 15, 1896, another lot, \$210,000, was authorized by the board of directors, but not for immediate issue. They were "to be held until officers think proper to use same in interests of company." Another lot, \$550,000, was authorized December 28, 1895.

The first lot, issued in 1895, was subsequently redeemed and was on hand, in the vault, January 1, 1898. Of the \$210,000 lot, \$177,100 were sold, the remainder, \$32,900, being also on hand January 1, 1898. The \$550,000 lot was given to the stockholders as a dividend in 1896, together with \$550,000 new stock.

Prior to that date, or on January 21, 1893, the first increase in the capital stock was authorized, being for \$500,000. This stock was sold to the old stockholders as of record February 23, 1893, at par. The market value of the new stock immediately after its issue was \$286 per share. Its issue at par under the circumstances was therefore equivalent to an extra dividend of 18 6-10 per cent. to the old stockholders on the \$5,000,000 capital already outstanding.

On December 28, 1895, another increase in the capital stock was authorized, this time for \$1,100,000. At the same meeting an extra dividend of 20 per cent., payable half in new stock and half in debentures maturing in 1915, was declared. The remaining \$550,000 new stock authorized was sold to stockholders of record January 6, 1896, at par. Immediately after the issue of the new stock its market value was quoted on the Chicago Stock Exchange at \$238 per share bid.

The premium on the \$550,000 new stock sold, the market value of the \$550,000 given to the old stockholders, and the \$550,000 debentures at par made a total extra dividend of 47 6-10 per cent. on the \$5,500,000 stock then outstanding.

The total of the extra dividends above referred to was \$3,548,000. The total of the regular dividends paid to stockholders of the North Chicago Street Railroad Company was \$5,764,253.50. The dividends from May 24, 1886, to December 31, 1892, both regular and extra, averaged 6.86 per cent per annum. From January 1, 1893, to December 31, 1897, they averaged 25.24 per cent per annum, including the bonuses on new stock issued at par.

Under the terms of the lease of May 24, 1886, a guaranteed dividend of 30 per cent. per annum has been paid on the \$249,900 outstanding stock of the North Chicago City Railway Company. The first payment of this character was made July 1, 1886, and quarterly thereafter. The total to December 31, 1897, is \$822,670.

The aggregate profit received by the stockholders of both companies from May 24, 1886, to December 31, 1897, is \$10,134,923.50.

The total assets of both companies on December 31, 1897, were \$17,339,508.02, and the total liabilities, exclusive of capital stock, \$16,576,926.97, leaving net assets of only \$762,581.05 to represent \$7,100,000 capital stock.

Upon this small surplus, dividends, amounting to \$866,913, were paid in 1897, being at the rate of 113.68 per cent. per annum.

The bonded and mortgage debt of the companies was \$7,943,000, upon which the annual interest charge is \$407,415, as follows:

North Chi. City Ry.....	\$500,000, at 6%	\$30,000
North Chi. City Ry.....	2,497,000, at 4½%	112,365
North Chi. St. R. R.....	3,171,000, at 5%	158,550
North Chi. St. R. R.....	1,775,000, at 6%	106,500

Totals \$7,943,000, at 5.13% \$407,415

The North Chicago Street Railroad Company has also outstanding \$2,434,683 other interest bearing debt, but the interest paid by the company on this debt is more than offset by the interest received on \$3,307,550 interest earning securities owned by the company. As the interest thus received is credited to the same account as that to which the interest paid out is charged, the net balance of this account only appears in the annual statements as a charge against the earnings.

The net balance for 1897 was \$196,824.52, which is at the rate of 10.9 per cent. per annum on the proceeds of bonds actually invested in the plant of the company. For example, the total assets of the company on December 31, 1897, were \$8,170,176.13, of which \$554,225.16 was cash and cash items, \$5,810,562.32 bonds, stocks, notes and open accounts, and the balance (\$1,805,388.65) plant, or track, real estate, buildings and equipment used in the operation of the road. These assets represent the proceeds of \$4,931,000 bonds, \$2,449,683 miscellaneous interest bearing debt, and \$789,493.13 non-interest debt.

As the cost-value of the plant represents only \$1,805,388.65 of the total capital employed, it follows that the net interest of \$196,824.52 paid out in 1897 is for the use of only that portion of the capital, and that income derived from the investment of the remaining capital should at least set off the interest paid out for its use. This, it will be seen, is practically the case when the cost of the plants of both the lessee and the lessor companies are considered jointly.

The capital represented by the joint plants is \$6,422,298.12 and the total net interest paid out in 1897 was \$337,895.61, or 5.26 per cent. on the cost value of the plants. By reference to the schedule on a preceding page, showing the interest rate of the bonds outstanding, it will be seen that the average is 5.13 per cent. per annum, or very nearly the same as the rate actually paid for the use of the capital invested in the plants.

The net income from the operation of the plants in 1897, after the payment of all expenses, including the interest charges above referred to, was \$1,118,026.99, or 17.41 per cent. on the cost value of the plants. The gross earnings were \$2,836,522.41, or 44.17 per cent. on the cost value of the plant.

Sec. 8.—Mileage of North Side Lines.

The mileage of the North Chicago City Railway Company and the North Chicago Street Railroad Company is summarized as follows:

	Miles S. T.
NORTH CHICAGO CITY RAILWAY.	
Original horse road at date of lease, May 24, 1886.....	44.774
New horse road, built since May 24, 1886.....	23.067
New cable road, built since May 24, 1886.....	1.862
New electric road, built since May 24, 1886.....	3.626
NORTH CHICAGO STREET RAILROAD.	
New horse road, built since lease of May 24, 1886.....	10.713
New electric, built since May 24, 1886.....	12.014
Total	96.056

Changes made in the above roads since their construction are as follows:

NORTH CHICAGO CITY RAILWAY.	
Original road as it existed on May 24, 1886, afterward converted into cable road.....	16.448

Original road as it existed on May 24, 1886, and afterward converted into electric road.....	28.173
Original horse road still remaining on December 31, 1897.....	0.153
New horse road, built since lease of May 24, 1886, afterward converted into electric road.....	22.280
New horse road, built since lease of May 24, 1886, and still remaining as horse road on Dec. 31, 1897.....	0.787
Total changes in road.....	67.841
Add new extensions since May 24, 1886.	
Cable road	1.862
Electric road.....	3.606
Present mileage (Dec. 31, 1897).....	73.329

NORTH CHICAGO STREET RAILROAD.

Original horse road built by lessee company, afterward converted into electric road.....	10.713
Add extensions electric road.....	12.014
Total extensions and present mileage.....	22.727

RECAPITULATION.

North Chicago City Ry., present mileage.....	73.329
North Chicago St. R. R., present mileage.....	22.727
Total	96.056
distributed as follows:	

	Lineal Feet.	Feet, Single Track.	Miles S.T.
Cable road.....	50,521	96,678	18.310
Electric road.....	211,916.95	405,521.2	76.806
Horse road.....	3,570.5	4,960.9	0.940
	266,008.45	507,160.1	96.056

EXHIBIT IV.—CHICAGO PASSENGER RAILWAY CO.

Sec. 1.—Agreements with W. C. S. R. R. Co.

This company was incorporated February 12, 1883. At the time of the lease of the Chicago West Division Railway Co., October 20, 1887, its outstanding capital stock was \$1,000,000, divided into 10,000 shares of \$100 each, 7,300 of which were owned by the Chicago West Division Railway Co. These shares cost the Chicago West Division Ry. Co. \$850,850, or \$116.83 per share, and

were conveyed to the West Chicago Street Railroad Co. under the lease of October 20, 1887. There were also outstanding at the time of the lease \$400,000, 6 per cent. bonds.

The mileage of the road on October 20, 1887, consisted of 29.79 miles of single track horse railroad.

On November 16, 1888, this company entered into an agreement with the West Chicago St. R. R. Co. for the mutual use of each other's tracks. Among other stipulations being the following, viz.:

The Chicago Passenger Ry. Co. to construct a double-track cable railroad on Desplaines St. between Washington St. and Austin Ave.; on Washington St. from Desplaines St. through the Washington St. tunnel to Franklin St.; single track on Franklin St. to Madison St. from Washington St., and single track on Washington St. from State St. to Franklin St.

West Chicago St. R. R. Co. to use the above named tracks in common with the Chicago Passenger Ry. Co., and as consideration to pay to the Chicago Passenger Ry. Co. the entire cost of the construction and also 5 per cent. per annum upon the amount which shall be paid out by the Chicago Passenger Ry. Co. in rebuilding and repaving the Washington St. tunnel.

West Chicago St. R. R. Co. to provide for the traction of the cars of the Chicago Passenger Ry. Co. through the tunnel and around the loop and charge therefor a reasonable sum to be agreed upon.

The contract to continue for 50 years. But on March 15, 1889, this contract was amended as follows:

The West Chicago St. R. R. Co. stipulates to construct the cable roads mentioned with the exception that the double track on Desplaines St. shall be from Washington St. to Milwaukee Ave. instead of to Austin Ave. The cost and expense of construction of tracks, excepting the cable tracks covered by said agreement of November 16, 1888, as herein modified, and the cost and expense of all the permanent improvements and extensions provided for in this agreement, shall be paid for in the following manner:

The said Passenger Ry. Co. shall issue its bonds, interest not to exceed 6 per cent., to an amount sufficient to fund the floating indebtedness of said Passenger Ry. Co., and to pay for the im-

provements which said Passenger Ry. Co. has constructed to make or is under obligation to make, and also such bonds as it shall be necessary to issue to pay for any construction, permanent improvements or extensions, which shall be made for said Passenger Ry. Co. by said Street Railroad Co. under this agreement, and from the proceeds of the sale of said bonds the Passenger Ry. Co. shall fund all its floating indebtedness and also pay the Street Railroad Co. for all construction, permanent improvements or extensions, saving the construction of cable tracks specified in said agreement of November 16, 1888.

The agreement of November 16, 1888, was also modified to release the Chicago Passenger Ry. Co. from the obligation to pay for the traction of its cars and also to release the West Chicago St. R. R. Co. from the payment of 5 per cent. per annum of the cost to rebuild and repair the Washington St. tunnel, because the Chicago Passenger Ry. Co. was to pay for the improvements by the issue of its bonds and the West Chicago St. R. R. was to guarantee the interest on the same.

In consideration for these modifications the West Chicago St. R. R. Co. stipulates to pay the Chicago Passenger Ry. Co. \$25,000 semi-annually, being 5 per cent. on the outstanding capital stock.

The agreement also stipulated that the West Chicago St. R. R. Co. was to receive the gross receipts and pay all the operating expenses of the Chicago Passenger Ry. Co. from March 15, 1889.

Sec. 2.—Operations under Agreements.

On June 8, 1889, the Chicago Passenger Ry. Co. decided to issue \$1,000,000 6 per cent. consolidated mortgage bonds, \$400,000 to be set aside to redeem the 1st mortgage bonds for the same amount then outstanding. The balance was disposed of, but in what manner I have been unable to learn, except that part were sold by the West Chicago St. R. R. Co. and the proceeds, \$70,309.75, applied in part payment of \$104,737.66 due the West Chicago St. R. R. Co. for betterments down to December 31, 1894, the balance (\$34,426.91) being carried forward until May 9, 1896, when, with other accumulations on account of betterments, another settlement was made by arbitration, referred to more particularly further on.

On July 1, 1890, both the Chicago West Division Ry. Co. and the West Chicago St. R. R. Co. "relinquished all control and direction of the 7,300 shares of stock of the Chicago Passenger Ry. Co., leaving the same in the hands of trustees for the use and benefit of the stockholders of this company, so far as their interests may appear, as individuals, etc.," and on July 14, 1890, Mr. Yerkes was "requested to accept the trust hereby created."

These were the 7,300 shares specifically included in the schedule of property to be turned over to the West Chicago St. R. R. Co. at the time of its lease of the Chicago West Division Ry. Co. as part of the property of the last named company.¹

On May 14, 1888, the president of the West Chicago St. R. R. Co. was authorized to guarantee all contracts which may be made by the Chicago Passenger Ry. Co. with the U. S. Construction Co. I have not been able to learn to what this refers unless to the construction of the original cable system on such streets as the Chicago Passenger Ry. Co. and not the West Chicago St. R. R. Co. was specifically authorized by ordinance to use.

The joint agreement of November 16, 1888, specifically requires the Chicago Passenger Ry. Co. to construct the cable system on Desplaines St., Washington St. and through the Washington St. tunnel, etc., etc., but provides that the West Chicago St. R. R. Co. shall pay the entire cost.

The amended agreement of March 15, 1889, confirms this stipulation but also recites that the Chicago Passenger Ry. Co. shall issue its bonds "to pay for the improvements which said Passenger Ry. has contracted to make *or is under obligation to make, and also* such bonds as it shall be necessary to issue to pay for any construction, permanent improvements or extensions which shall be made for said Passenger Ry. Co. by said Street R. R. under this agreement."

Not having been able to gain access to the books of the Chicago Passenger Ry. Co. or of the U. S. Construction Co., I am

¹ As a matter of fact, they never were actually in possession of the West Chicago St. R. R. Co., having been, by express resolution of the Board of Directors of that company on November 29, 1887, delivered direct to Mr. Yerkes by the Chicago West Division Ry. Co.—at least 7,270 shares were so delivered, the remaining 30 shares being delivered "to such person or persons as Mr. Yerkes may name." On December 14, 1887, it was, however, decided that Mr. Yerkes should hold the entire 7,300 shares.

unable to state what, if any, improvements were made to the property of the former company independent of such as were made by the West Chicago St. R. R. Co. and appear on the books of the latter company, but some obligation of that character seems to be referred to in the joint agreement.

On February 26, 1892, the Chicago Passenger Ry. Co. purchased Lot 7, B. 47, Original Town of Chicago, with improvements thereon, from C. T. Yerkes and J. B. Parsons for \$100,000, which sum was paid over to the West Chicago St. R. R. Co., and that company assumed the mortgage of \$10,000, which then existed on the property. A lease of this property for 99 years had previously been secured by the West Chicago St. R. R. Co.

On March 19, 1896, the directors of the Chicago Passenger Ry. Co. and the West Chicago St. R. R. Co. were unable to come to an agreement as to the amount due the former for betterments made on account of the latter Company, and decided to refer the matter to Geo. A. Yuille and M. C. McDonald as arbitrators. On May 9, 1896, the arbitrators reported the amount due \$789,990.07, as follows:

12th St., East of California Ave.....	\$48,650.39
East Harrison St.....	2,950.40
Electrical construction.....	197,484.33
Track and paving.....	194,495.45
Cable and conduits.....	96,400.50
Proportion of Western Ave. power house.....	250,000.00

Total.....\$789,990.07

All these improvements were made between January 1, 1896, and the date of the report, and were therefore of an electrical character.

Sec. 3.—Stock and Bond Issues.

In the anticipation of this settlement the directors of the Chicago Passenger Ry. Co. had, on March 3, 1896, voted to increase the capital stock from \$1,000,000 to \$2,000,000, and on April 8, 1896, the two companies entered into an agreement that if the Chicago Passenger Ry. Co. would sell the new stock and apply the proceeds, so far as necessary, towards reimbursing the West Chicago St. R. R. Co. for the above disbursements, then the latter company would undertake to pay to said Chicago Passenger Ry. Co., or to distribute the same among the respective shareholders of said increased capital stock, \$25,000 on the 15th day of

September, 1896, and semi-annually thereafter on the 15th days of March and September of each and every year a like amount of \$25,000, payments to continue for the same period as payments of a like amount and for the same purpose mentioned in the amended agreement of March 15, 1889, the purpose being to guarantee a uniform annual dividend of 5 per cent. on the entire issue of \$2,000,000, including the new issue of \$1,000,000, of capital stock of the Chicago Passenger Ry. Co.

The West Chicago St. R. R. Co. undertook to float the new stock, but notwithstanding the guaranteed 5 per cent. dividend there was apparently no market for it, only 1,163 shares being disposed of at seventy-five cents on the dollar, or for an aggregate of \$87,225 cash.

This apparently lead the directors of the Chicago Passenger Ry. Co. to decide upon the issue of more bonds with which to pay their debt to the West Chicago St. R. R. Co., for on March 29, 1897, a new Consolidated mortgage for \$2,000,000, bearing 5 per cent. interest, was authorized, \$400,000 being set aside to retire the outstanding 1st mortgage 6 per cent. bonds for the same amount, and \$600,000 being set aside to retire the outstanding 6 per cent. consolidated mortgage bonds of June 8, 1889. Of the remaining bonds, \$734,000 was paid over to the West Chicago St. R. R. Co. as a partial settlement of the claim of the latter company under the award of the arbitrators of May 9, 1896.

As before stated, only \$70,309.75 of the proceeds of the \$600,000 6 per cent. consolidated mortgage bonds of June 8, 1889, were received by the West Chicago St. R. R. Co. In what way the balance was disposed of I am unable to say, except that \$100,000 was paid for Lot 7, Block 47, Original Town of Chicago, as before stated, although the amended agreement of March 15, 1889, required that "the said Passenger Ry. shall issue its bonds, interest not to exceed 6 per cent., to an amount sufficient to fund the floating indebtedness of said Passenger Ry. Co., etc.," which would seem to indicate the manner in which the bonds were disposed of, although it is very probable that some of them were used to divide the accumulated surplus of the company among the old stockholders at the date of the agreement of March 15, 1889, as was done in the case of the Chicago West Division Ry. Co. at the time of its lease to the West Chicago St. R. R. Co.

The company experienced the same difficulty in substituting its \$600,000 5 per cent. bonds for the outstanding 6 per cent. bonds for the same amount as in floating the new stock, and was obliged to issue \$224,000 of the new stock as a bonus to secure the retirement of the old 6 per cent. consolidated bonds.

On April 12, 1897, the directors of the West Chicago St. R. R. Co. passed a resolution guaranteeing the principal and interest of the \$2,000,000 5 per cent. consolidated bonds of the Chicago Passenger Ry. Co. of the issue of March 29, 1897, and on the same date, by mutual agreement, the term of the lease of March 15, 1889, was extended 50 years from March 14, 1904, making the full term 65 years.

Sec. 4.—Original Cost of Assets.

As the books of that company are inaccessible, the actual cost of construction is likewise unobtainable, but the approximate cost may be obtained in connection with the outstanding capital stock and bonds of the company on November 16, 1888, which were: Capital stock, \$1,000,000; 1st mortgage bonds, \$400,000; total, \$1,400,000.

After the lease of this road by the West Chicago Street R. R. Co., the latter company built 4.40 miles of additional single track horse railroad at a cost of \$104,737.66, or \$23,825.68 per mile. At the same rate per mile the cost of 29.79 miles would be \$709,767.01, which would leave \$690,232.99, less \$29,030, for 37 horse-cars known to have been turned over to the West Chicago St. R. R. Co., to represent the other property turned over under the lease, including the real estate and buildings.

During 1888 and 1889, 3.15 miles of the original mileage were converted into cable road, the estimated cost of which is given elsewhere, 0.075 miles were transferred to the Chicago City Ry. Co. and 28.585 miles, including the 4.40 miles built by the West Chicago St. R. R. Co., were converted into electric road.

There remains of the original horse railroad 2.38 miles, representing a cost value of \$56,705.12, or \$23,825.68 per mile.

The cost to convert the 28.585 miles of horse railroad into electric road was as follows:

2.01 miles at \$24,204.17 per mile.....	\$48,650.30
26.575 miles at \$18,573.46 per mile.....	493,589.68
Total.....	\$542,240.07

The track and paving of 26.575 miles cost at \$7,318.75 per mile ¹	194,495.45
Electrical construction 26.575 miles at \$7,431.21 per mile	197,484.33
Cable and conduits, 28.585 miles at \$3,372.76 per mile	96,409.50
Miscellaneous, 26.575 miles at \$195.87 per mile	5,200.40
Proportionate cost of Western Ave. power house was \$250,000, or \$8,745.85 per mile, for 28.585 miles of single track.	

The total cost of the Western Ave. power house was \$520,455.65. The proportion charged to the Chicago Passenger Ry. Co. (\$250,000) was the amount agreed upon by the arbitrators in their report of May 9, 1896. This amount seems too high for the following reasons:

The total mileage of electric roads on the West Side is 173.73 miles single track, including the 28.585 miles of Chicago Passenger Ry. single track referred to above. The mileage on the North Side is 147.07 single track. The total mileage of all three roads is 320.8 miles single track.

The power to operate these roads is obtained from three different power houses, viz: Western Ave., California Ave. and Hawthorne Ave., but without respect to the particular company to whom the power houses belong, the California Ave. power house, for example, furnishing power to the North and West Side lines as well as to the Chicago Electric Transit Co., to which company it belongs. On the other hand, the power houses at Western Ave. on the West Side and Hawthorne Ave. on the North Side supply power to other roads, the total mileage supplied altogether by these two power houses being greater than the combined mileage of the North Chicago St. R. R. Co. and the West Chicago St. R. R. Co., including that of the Chicago Passenger Ry. and Chicago West Division Ry. companies, to-wit: 320.8 miles single track.

The cost of Western Ave. power house, exclusive of the land on which it is built, which was formerly the site of the car shops of the Chicago West Division Ry. Co., and conveyed to the West Chicago St. R. R. Co. under the lease of October 20, 1887, was \$520,455.65, as heretofore stated, \$155,535.55 for the building and \$364,920 for the machinery. The cost of the Hawthorne Ave. power house, including the land and machinery, was \$377,480.80. Total for both \$897,936.45, or \$2,800 per mile. Even if an estimate of \$150,000 is placed upon the 126.4x2,219.6 ft. of land upon which the Western Ave. power house stands and added to the total cost the cost per mile of electric single track is not increased \$500, so that the first cost of \$8,745.85 per mile for 28.585 miles of single track given above is, therefore, unreliable as a basis for computing the cost per mile, as it seems entirely out of proportion to the total mileage operated.

Of the original \$814,504.67 first cost of the 29.79 miles single track horse railroad existing at the time of the lease and of the

¹ The lineal feet of street covered by the 28.585 miles of track is 64,627 feet and the square yards of street paving amount to 114,892.4, divided as follows: Granite, 15,194.7; cedar, 11,946.6; oak, 11,164.4; cobble, 76,586.7.

The average cost per square yard, new, has been: Granite, \$2; cedar, \$1; oak, \$2, and cobble, \$1.25.

Exactly how many square yards of new paving is represented in the item of \$194,495.45 for track and paving, I am unable to state, but if the 114,892.4 square yards of street were laid new and at the rates named the total cost would have been \$217,828, or at the rate of \$17,796.41 per lineal mile.

4.40 miles built subsequently, there remains 2.38 miles, which cost \$56,705.12, leaving \$757,799.55 to represent depreciation in cost value because of the subsequent charge to to construction account of the cost to construct and entirely distinct and different kind of road in its place, all of the cost of the old road being properly chargeable to profit and loss.

Of the 3.15 miles of single-track horse railroad converted into cable road, all but 0.314 of a mile, forming part of the State St. loop extension, was reconstructed by the U. S. Construction Co., and the whole was to be paid for, under the lease, by the West Chicago St. R. R. Co., as part of the consideration to be paid by the lessee company. For reasons that will be apparent, however, it is necessary to consider the cost of reconstructing the 2.836 miles in connection with the cost of constructing the entire cable system.

As elsewhere stated, the cost per mile of the Blue Island Ave. and Halsted cable road was \$96,455.43, and it is fair to presume, in the absence of any definite information to the contrary, that the construction having been done at very nearly the same time, the 2.856 miles was built at approximately the same cost per mile, or an aggregate of \$273,547.60.

The 34.115 miles single-track railroad existing on November 31, 1897, represented, therefore, a total investment of \$1,677,411.29, as follows:

2.836 miles single track cable	\$273,547.60
0.314 miles single track cable	43,715.51
2.38 miles single track horse railroad	56,705.12
28.585 miles single track electric railroad.....	542,240.07
Real estate and buildings.....	761,202.99
Total.....	\$1,677,411.29

Sec. 5.—Liabilities at Present.

Against this there was outstanding on December 31, 1897:

First mortgage 6 per cent. bonds.....	\$400,000.00
Consolidated 5 per cent. bonds.....	1,334,000.00
Capital stock	1,340,306.00
Due West Chicago St. R. R.....	49,158.40
Total.....	\$3,123,458.40

showing outstanding liabilities in excess of the cost value of the property to the extent of \$1,446,047.20.

A reappraisement of the real estate of this company will doubtless reduce this excess to a considerable extent, as I understand its

fair market value is greater than the outstanding bonds of the company.

EXHIBIT V.—CHICAGO WEST DIVISION RAILWAY CO.

Sec. 1.—Early Operations.

This company was incorporated February 21, 1861. On October 29, 1887, its board of directors approved a lease of the road to the West Chicago St. R. R. Co. for 999 years, the same to take effect as of October 20, 1887. The particulars of this lease will be found more fully set forth in Exhibit V.

Its capital stock on October 20, 1887, was \$1,250,000, which remains the same at the date of this report. Its bonded indebtedness is \$4,070,000, 1st mortgage $4\frac{1}{2}$ per cent. 40-year bonds, dated July 1, 1892, which were issued by resolution of the board of directors May 28, 1892, to retire \$4,040,000 certificates of indebtedness of various dates and one note for \$30,000 secured by trust deed for certain real estate, all of which were outstanding at the date of the lease except as elsewhere fully set forth in this report.

The lease between this company and the West Chicago St. R. R. provides that in anticipation of the termination of the lease at any time or for any cause, and "for the purpose of preserving the necessary information for an intelligent accounting * * * an account of the cost of all permanent improvements to the property demised" shall be kept.

But such disbursements of the character mentioned as have been made since the date of the lease have not been kept distinct and separate from the disbursements of the lessee company on its account, as may be inferred from the response of the management to a former request of your committee for "the itemized cost of all buildings and equipping of new lines and extensions, whether owned or leased, etc.," the response being that "it is impossible to give statement as asked for itemized, as the construction and equipping of new lines has been charged to the general construction account, the total cost of which since the opening of the road has been \$9,334,395.16."

Not only has it been necessary to analyze the general construction account of the West Chicago St. R. R. Co. for a complete list of the expenditures for permanent improvements on account of the Chicago West Division Ry Co., but a comprehensive knowledge of the acts of that company can likewise only be obtained by an examination of the corporate acts of the lessee company, those of the lessor company being practically dictated by the lessee company. For that reason reference is had to that part of this report considered under the heading "West Chicago St. R. R. Co." for any further general information concerning the Chicago West Division Ry. Co. and to Exhibit 6 for such information concerning the expenditure for permanent improvements as has been disclosed by this examination.

Sec. 2.—Financial Condition in 1887.

The mileage of this road on October 20, 1887, the date of its lease to the West Chicago St. R. R. Co., was 98.45 miles of single track, the cost of constructing which was \$1,935,131.52, or \$19,655.98 per mile.

This comparatively low cost at the time referred to was, I am informed, due principally to two causes: (1) it had been the practice of this company for several years prior to its lease to the West Chicago St. R. R. Co. to pay for extensions and betterments out of its surplus earnings, and (2) only two streets—Madison St. and Randolph St.—representing 14 miles out of the total 98.45 miles of single track, were paved and that mostly with cheap macadam.

The company possessed real estate and buildings, representing a cost of \$449,158.73 and \$927,984.00 respectively. It also owned 492 box or closed cars and 301 open cars, which cost \$658,456, and 4,243 horses, for which \$567,599 had been paid, or an average of \$134 each. Its engines and machinery cost \$18,459, snow-plows \$9,170, omnibuses \$9,172.20, stable furniture \$6,105.16, office furniture and fixtures \$3,695.77, harness \$10,423.70, wagons \$2,430.90, altogether a total of \$4,597,785.98, representing property regularly employed in the operation of its road or connected therewith, and all of which was conveyed to the West Chicago St. R. R. Co. under the lease of October 20, 1887.

In addition it owned certain notes and bonds representing an

outlay of \$14,430, and certain open accounts representing \$5,005.19.

It also owned 7,300 shares of the Chicago Passenger Ry. Co. capital stock, for which it had paid \$850,850.00, which were also transferred to the West Chicago St. R. R. Co. under the lease, making the total cost value of the property transferred to the latter company \$5,448,635.98.

Against this it had outstanding liabilities at the time as follows: Capital stock, \$1,250,000; certificates of indebtedness, \$2,987,500; Suffern note, \$30,000; total, \$4,267,500. It had other liabilities, but in the settlement under the lease they were not assumed by the lessee company. For example, there were outstanding bills payable amounting to \$437,940.86, accrued interest on bonds \$56,291.68, conductors' and drivers' deposits \$21,125, taxes accrued \$31,679, and certain accounts payable \$1,974.52, making total liabilities of every character \$4,816,511.06, against total assets of every character \$5,468,071.17, and showing a net surplus of \$651,560.11 on October 29, 1887.

Sec. 3.—Transfer of Property under Lease.

This surplus belonged to the stockholders of the Chicago West Division Ry. Co., and in the division and transfer of the assets and liabilities under the lease it became necessary to devise some method by which it could be distributed among the stockholders. In order to make the distribution and secure funds for the immediate payment of the \$549,011.06 floating debt not assumed by the lessee company, it was decided to issue \$1,052,500 additional certificates of indebtedness, making the total amount \$4,040,000.

The remaining sum necessary to effect the liquidation was secured by means of the following settlement with the West Chicago St. R. R. Co., viz.:

Payments made by Chicago West Division Ry. Co. for account of the West Chicago St. R. R. Co.:

Operating expenses, Sept., Oct. and Nov., 1887.....	\$408,977.17
Operating expenses, Dec., 1887.....	153,264.42
Taxes	6,709.73
Interest coupons 5 per cent. Jan., 1888	86,000.00
Interest coupons 6 per cent. Dec., 1887 (one half).....	7,125.00
Sundry bills	2,280.00
Salaries of officers 12 days in Jan., 1888.....	821.88

37 passenger cars (Chicago Passenger Ry.).....	29,030.00
Advanced on note of West Chicago St. R. R. Co.....	150,000.00
Total.....	\$844,208.20

Credits allowed West Chicago St. R. R. Co.:

Sept., Oct. and Nov., 1887, receipts.....	\$714,622.84
One-third taxes for 1887.....	11,720.36
Interest 5 per cent. certificates, July 1 to Sept. 1, 1887.....	28,666.67
Interest 5 per cent. certificates, Jan., 1888.....	5,000.00
City of Chicago water bill.....	127.65
Cash.....	25,816.68
Sum stipulated in lease to be paid by Chicago West Division Ry. Co....	37,500.00

Total.....	\$823,454.20
Balance due Chicago West Division Ry. Co.....	\$20,754.00

This balance was paid by the assumption by the West Chicago St. R. R. Co. of the amount due conductors and drivers on account of their deposits with the Chicago West Division Ry. Co., by which assumption these deposits were transferred to the lessee company and became a liability of that company, thereby reducing the amount of the floating debt to be paid by the Chicago West Division Ry. Co. in the final settlement.

Sec. 4.—Operations under Lease.

After the lease of this road to the West Chicago St. R. R. Co. 1.96 miles of new single-track horse railroad extension were built by the last named company for or on account of the lessor company, the cost of which, so far as the books show it distinct from the general disbursements, on construction account, is obscure, but the cost was evidently the same as other horse-railroad being built at that time, viz.: \$23,825.68 per mile.

This small extension, with 66.72 miles of the original 98.45, was afterward converted into electric railroad, a total of 68.68 miles of single track, at a cost of \$825,163.04, or \$11,985.48 per mile.

Of the remaining track 450 feet on Lake St. from Wabash Ave. to State St. was transferred to the Chicago City Ry. Co. to form part of their cable loop; 33,054.7 feet, or 6.26 miles, still remains as horse railroad, representing an original cost value of \$123,046.43, and 134,018.6, or 25.38 miles, has been converted into cable road, for a part of which the exact cost is uncertain, as elsewhere explained in this report.

For that part known as the Blue Island Ave. & Halsted St. cable line, extending from Western Ave. to Halsted St. on Blue Island Ave. and from the junction of Blue Island Ave. and Halsted St. on Halsted St. to O'Neill, and on O'Neill to the car barns; from

Blue Island Ave. to Van Buren St. on Halsted, and on Van Buren through the tunnel and around the loop, a distance of 11.655 miles single track, the cost was \$1,124,188.06, or \$96,455.43 per mile, independent of the cable power house at 12th St. and Blue Island Ave., which cost \$233,290.50 for the land and buildings and \$173,240.47 for the machinery, and of the Van Buren St. power house, which cost \$142,326.44 for the buildings and land and \$116,627.53 for machinery.

The exact cost of this entire system, including real estate, power houses and machinery, is established, and represents a total investment as follows:

11.655 miles single track cable road.....	\$1,124,188.06
Blue Island Ave. power house { Real estate.....	233,290.50
{ Machinery.....	173,240.47
Van Buren St. power house { Real estate.....	142,326.44
{ Machinery.....	116,627.53
Total cost.....	\$1,780,673.00

Of the original \$1,935,131.52 first cost of the 98.45 miles of single-track road existing at the time of the lease, plus \$46,698.51 at the same rate per mile for the 1.96 miles built soon after, there remains of the total horse railroad mileage 6.26 miles single track and \$123,046.43 of the original cost, showing a depreciation in value, because of the substitution of a road of a different character, the cost of which substitution is necessarily taken as the cost value of the road after the change, the sum of \$1,858,783.60 chargeable to profit and loss.

Sec. 5.—Assets and Liabilities Compared.

Of the original road and extensions made since the lease there existed on December 31, 1897, the following:

6.26 miles single track horse road.....	\$123,046.43
68.68 miles single track electric road.....	825,163.04
11.655 miles single track cable road (actual).....	1,124,188.06
0.321 miles single track cable road (actual).....	44,690.05
13.404 miles single track cable road (estimated).....	1,292,888.56
100.32 miles single track.....	\$3,409,976.14
Add Real estate, on Oct. 20, 1887.....	449,158.73
Buildings, on Oct. 20, 1887.....	927,984.00
Western Ave. power house.....	520,455.65
Halsted St. car house alterations.....	11,803.70
New building Clybourn Place.....	52,839.50
Total.....	\$5,372,217.72

Against this are outstanding liabilities as follows:

Capital stock	\$1,250,000.00
First mortgage bonds.....	4,070,000.00
Due West Chicago St. R. R. Co.....	4,869,998.38
Total.....	\$10,189,998.38

showing a deficit of \$4,817,780.66.

This deficit, however, does not take into consideration the fact that in converting the 68.68 miles single-track horse road into trolley road there may have been more or less salvage in the old road which became incorporated into the new trolley road, the value of which is lost in assuming that the sum actually expended in making the conversion likewise represents the full cost value of the road as it exists at the present day. As a matter of fact, the entire street pavement of the old horse road referred to was relaid or continued in use as before the change, and therefore its original cost is properly a part of the total cost value of the new electric road.

The exact amount of pavement thus relaid and its original cost are as follows:

Wood, 16.603 miles by 8 feet, cost.....	\$77,923.00
Cobble, 44.107 miles by 8 feet, cost.....	258,761.25
Granite, 7.97 miles by 8 feet, cost.....	74,811.58
68.68 miles Total, cost.....	\$411,495.83

Deducting this sum from the deficit first obtained leaves as a final deficit \$4,406,284.73, and by adding it to the sum actually expended in making the change from horse to trolley road, to wit: \$825,163.04, makes the total value of the 68.68 miles single-track trolley road \$1,236,658.97, or an average of \$18,006.10 per mile.

EXHIBIT VI.—WEST CHICAGO STREET RAILROAD CO.

Sec. 1.—Lease of West Side Lines.

This company was incorporated July 19, 1887. Its original capital stock was \$10,000,000, divided into 100,000 shares of \$100 each. The original subscribers and directors were:

David Crawford, 99,497 shares; Richard C. Crawford, 500 shares; J. Chas. Moore, 1 share; J. A. Reeve, 1 share; Burdette C. Barnes, 1 share. At the first meeting of the board of directors

Reeve, Barnes and David Crawford resigned and Andrew Crawford, F. S. Winston and C. T. Yerkes were elected directors in their places.

On November 11, 1887, P. A. B. Widener, W. L. Elkins and Wm. H. Kemble apparently owned 6,251 shares of stock of the Chicago West Division Railway Company, or one share more than one-half the entire capital stock of the last named company. At the meeting of the board of directors of the West Chicago St. R. R. Co. on November 11, 1887, it was proposed to purchase this stock from Widener, Elkins and Kemble, and thereby secure control of the road. At the same time it was proposed to lease the Chicago West Division Ry. in the following terms:

Lessee to pay rental equal to 35 per cent. per annum on the capital stock of the lessor company, which was at that time and still remains \$1,250,000; \$109,375 per quarter; first payment Jan. 20, 1888. Lessee to receive the entire gross earnings from August 31, 1887, meaning the gross passenger receipts, and \$37,500 in cash. Lessee to assume the outstanding bonded debt of the lessor company, which at that time was as follows:

Certificates of indebtedness dated March 1, 1882, 6 per cent., 20 years..	\$125,000.00
Certificates of indebtedness dated June 1, 1882, 6 per cent., 20 years..	475,000.00
Certificates of indebtedness dated July 1, 1887, 5 per cent., 20 years..	3,440,000.00

Total.....	\$4,040,000.00
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Also note for \$30,000, secured by trust deed of Lot 1, Block 4, Suffern's	
Sub. S. W. ¼ Sec. 6-39-14, 5 per cent., dated April 26, 1886.....	30,000.00

Total.....	\$4,070,000.00
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The consideration for the lease and the 6,251 shares of stock was 4,100 bonds of the West Chicago St. R. R. Co., \$1,000 each, 5 per cent, 40 years (to be secured by the 6,251 shares of West Division stock), and \$6,000,000 in cash, or capital stock, at the option of the lessee company.

It was stipulated in the lease that the lease itself was to bear date and take effect as of October 20, 1887, and continue for 999 years; that if the lessee took up or redeemed all or any part of the \$4,070,000 outstanding debt the lessor company would issue new bonds to the lessee to take their place. Under this stipulation the present outstanding \$4,070,000 1st mortgage 4½ per cent. bonds of the Chicago West Division Ry. Co. were issued May 28, 1892.

It was further stipulated that the lease was not transferable.

This did not, however, apply to the Chicago Passenger Railway, which at that time was being operated by the Chicago West Division Railway Company, but it was expressly stipulated that the inventory of the property to be turned over by the last named company should include the 7,300 shares of the Chicago Passenger Ry. Co., then owned by the Chicago West Division Ry. Co., and by means of which control of the property of that company was also secured under the lease of October 20, 1887.

The lease also stipulated that the lessee company should build not less than 17 miles of cable road and "for the purpose of preserving the necessary information for an intelligent accounting between the parties hereto" an inventory of the property transferable was to be made and preserved, "also an account of the cost of all permanent improvements to the property demised that is made by said lessee other than ordinary repairs, herein provided for, to be made by said lessee, etc."

Sec. 2.—Construction of Cable Road.

I have succeeded in obtaining a partial list of the property transferred, but for the 17.47 miles of single-track cable road built soon after the lease was made I have been able to find no detailed account such as would seem to be clearly called for by the terms of the lease. The records simply show that on November 17, 1887, the board of directors authorized the president to enter into a contract with the United States Construction Company to lay a cable road on the following streets:

Madison St., double track, 40th St. to Desplaines or Jefferson Sts.; Desplaines or Jefferson, double track, Madison to Washington St.; Washington St., Desplaines or Jefferson through Washington St. tunnel to 5th Ave.; double track and single track from 5th Ave. to State St.; State St., Washington to Madison St., single track; Madison St., State to 5th Ave., single track; 5th Ave., Madison St. to Washington St., single track; Armitage Ave., Milwaukee Ave. to barn, double track; Milwaukee Ave., Armitage Ave. to Desplaines or Jefferson, double track; Desplaines or Jefferson, Milwaukee Ave. to Washington St., double track.

The contract subsequently entered into specified that the Construction Company shall furnish all necessary passenger and grip cars; repair and put in good condition the Washington St. tunnel and light the same; make all necessary vaults, changes of sewer and gas pipes, water pipes, conduits, pavements and any other improvements; also engines, engine houses, machinery, cables and all necessary changes of the cars now used on the horse railroads on said lines so to be cabled and any additional cars, to thoroughly equip the said cable tracks sufficient to do the said railroad company's business thereon. * * * In short, the said Construction Company shall furnish and do everything necessary to complete and

equip the said cable system except furnishing the real estate on which to erect necessary buildings—that to be provided by the said railroad company.

All patent rights of the Construction Company are conveyed to the railroad company. Work to commence within thirty days from receipt of authority from the City of Chicago. This authority was contained in the ordinance of March 30, 1888.

The consideration to be paid was \$4,000,000 in cash or stock at the option of the West Chicago St. R. R. Co. The company elected to pay in stock and "to deliver the same in installments from time to time as the work progressed upon estimates approved by the president of this company." The contract required that the "\$4,000,000 be paid in cash at once to the Construction Company. They to put \$4,000,000 in capital stock of the West Chicago St. R. R. in trust as security for the completion of the contract and receive instalments of it back on estimates of the president of the last named company of work done."

Pursuant to this stipulation, Geo. E. Newlin was on November 21, 1887, appointed trustee of the stock mentioned. On October 22, 1890, all of this stock had been delivered to the Construction Company by the trustee except 500 shares, and on that date these were ordered delivered by the board of directors and the Construction Company released from its contract, the same having been completed.

Sec. 3.—Capital Stock Issued.

The contract for the lease and the purchase of the 6,251 shares of Chicago West Division Ry. Company stock from Widener, Elkins and Kemble for \$4,100,000 in 1st mortgage 5 per cent, 40-year bonds of the new company and \$6,000,000 in cash or capital stock was passed and approved by the board of directors and stockholders on November 11, 1887, the stockholders voting as follows:

C. T. Yerkes, 99,497 shares; R. C. Crawford, 500 shares; Andrew Crawford, 1 share; F. S. Winston, 1 share; J. C. Moore, 1 share.

Although the lease between the Chicago West Division Ry. Co. and the West Chicago St. R. R. Co. was dated October 20, 1887, as a matter of fact the new management did not assume actual charge of the property until January 12, 1888. Their books of account, however, were opened as of December 1, 1887, and the

receipts and disbursements from Aug. 31, 1887, subsequently posted.

On the last day of December, 1887, the first entries concerning the purchase of the 6,251 shares of stock, the lease of the Chicago West Division Ry. and the contract with the U. S. Construction Company appear, and these indicate that Widener, Elkins and Kemble were paid \$5,100,000 for the 6,251 shares of stock and \$5,000,000 for securing the lease, and the U. S. Construction Company \$4,000,000 to construct the 17.47 miles of cable system already referred to. At the same time Widener, Elkins and Kemble are charged with \$6,000,000 and the U. S. Construction Company \$4,000,000, their respective subscriptions to the capital stock of the West Chicago St. R. R. Co., and "Capital Stock" account is credited with \$10,000,000 to balance the transaction on the books. Widener, Elkins and Kemble are then credited with having paid their subscription of \$6,000,000 in cash and the company takes credit with having paid them also in cash \$1,000,000 on account of the 6,251 shares of Chicago West Division stock and \$5,000,000 on account of the lease of the Chicago West Division Ry.

In the same manner the U. S. Construction Company is credited with paying its stock subscription in cash, and as an offset is charged with receiving the same amount in cash on account of the contract to construct the cable system already referred to.

The effect and obvious intent of these entries is to make it appear from the records that the capital stock was sold for cash and incidentally that the transaction in stock was entirely distinct and independent of the contract for the construction of the cable system, the purchase of the 6,251 shares of Chicago West Division Ry. Co. stock and the lease of the last named road; the fact that the contracting parties in each instance were identical was a mere coincidence without special significance.

The improbability that any of the capital stock was disposed of for cash may be inferred from several collateral facts.

(1) It was expressly stipulated in the lease and in the cable construction contract that payment might be made in *cash or capital stock* at the option of the Railroad Company, which reservation, though not conclusive in itself, is presumptive that payment was

made in capital stock, being the most convenient and economical form of payment.

(2) The parties to whom the West Chicago St. R. R. Co. was indebted being likewise indebted to the West Chicago St. R. R. Co. in precisely the same sum, one obligation being offset by the other, the most natural supposition is that the simplest and most direct method of settlement was adopted, which would have been to exchange the stock for receipted vouchers representing payments on account of the construction contract, lease, etc.

(3) Four millions of capital stock was placed in the hands of Geo. E. Newlin, as trustee, to be paid over to the U. S. Construction Co. in installments as work progressed on the cable system.

The total cost of the cable system, according to the contract, was not to exceed four million dollars, and so far as the "Construction" account shows this entire sum was paid to the U. S. Construction Company in cash in advance of any work done by that company; thereupon the latter company returned the money to the West Chicago St. R. R. Co., in payment of its subscription, receiving in return the \$4,000,000 capital stock referred to above, which it deposited in trust as a guarantee that it would complete the construction of the cable system.

Aside from the unusual character of the guarantee—the amount on deposit at all times being more than sufficient to cover any loss that the West Chicago St. R. R. Co. might sustain by being compelled to relet the contract—it will be noticed that the stock itself is supposed to have been paid for with the \$4,000,000 received from the West Chicago St. R. R. Co.

A careful examination of the books of the company shows that at no time prior to or approximating the date of the cable contract, November 17, 1887, was the West Chicago St. R. R. Co. in possession of so large a sum as \$4,000,000 in cash, and therefore could not have made any such payment to the U. S. Construction Co.

It had only its \$10,000,000 in capital stock with which to pay for anything. Its first issue of bonds (\$4,100,000) had not yet been printed, and in fact were not authorized till April 9, 1888, and it had not yet come into actual possession of the property or funds of the Chicago West Division Ry. Co., and therefore could not

make use of the receipts of that company from August 31, 1887, which under the lease were to be turned over.¹

It is very plain that no such sum in cash was paid to the U. S. Construction Co. by the West Chicago St. R. R. Co. as stated in its books, and it is equally clear that the \$4,000,000 in stock deposited in trust by the U. S. Construction Co. was not paid for at the time of its deposit, and therefore the instalments of stock subsequently paid over to the U. S. Construction Co. by the trustee from time to time were not a release of any part of the supposed guarantee deposit but actual payments in stock for work done as it progressed.²

The only entry in the books to show the payment of \$4,000,000 for the cable system is that of December 31, 1887, as already stated, and as that could not have been paid in cash it is fair to presume that it was paid in stock, the only available means the company possessed at that time of paying any such sum.

Immediately the stock was issued and became a liability of the company, it was necessary to offset it with an entry on the other side of the ledger, and this was done by opening "Construction" account and debiting it at once with \$4,000,000, although there was nothing in the way of tangible property to show for it.

Sec. 4.—Payment for Negotiating Lease.

The supposed receipt of \$6,000,000 in cash from Widener, Elkins and Kemble, in full payment of their subscription to the capital stock, and the immediate repayment of the money to them—\$5,000,000 on account of the lease which they had negotiated and which had been signed and approved by both parties, by the lessor on October 29, 1887, and by the lessee on November 11, 1887, and \$1,000,000 in advance for the 6,251 shares of Chicago West Division Ry. Co. stock which they were to deliver—are entries of a similar character, although the money or a cheque for

¹ Even if it had been in possession, the gross receipts from August 31, 1887, to December 31, 1887, when the transfer was made, without any deduction for operating expenses in the meantime, were less than one-quarter the sum supposed to have been paid in cash to the United States Construction Company prior to December 31, 1887.

² In this connection it may be well to call attention to the absence of any provision in the contract for the forfeiture of the whole or any part of the guarantee deposit for non-fulfillment of the contract, which in itself rendered the supposed guarantee of no value, and under the circumstances was useless, since the deposit would revert to its proper owner in that contingency.

\$6,000,000 might have actually been passed back and forth, but the improbability and inutility of such a movement is plain, since it was needless to effect a set-off in the accounts.

It is not part of my functions to enter into the question of the reasonableness of the charge of \$5,000,000 for simply negotiating the lease between the two railroad companies, one of which already controlled the acts of the other by reason of its ownership of a majority of the capital stock or for which ownership provision had already been made, but simply to state the facts as I find them. At the same time it would be impossible to pass over such a payment for services without comment, especially as the necessity for such service on the part of outside parties is not in the remotest degree apparent.

So far as the entries in the books are concerned, no attempt is made to conceal the payment of \$5,000,000 to Widener, Elkins and Kemble for negotiating the lease, although a consolidation of accounts two years after the payment may have had that for its object. Up to December 31, 1890, an account was carried on the ledger showing a debit balance of \$5,000,000 under the title "Leasehold." On that date it was closed out and the balance transferred to a new account entitled "Cable Road, Power Station, Lease and Equipment," and to the same account was transferred \$4,000,000 from the general "Construction" account, making a total to the debit of that account of \$9,000,000, which has been carried through the trial balances of the company each year since.

So far as this entry affected the construction account, it explicitly states that it is made "so that 'Construction' account will show the expenditures for new work other than that done by the U. S. Construction Co.," which is correct.

The payment of \$1,000,000 to Widener, Elkins and Kemble, however, seems to have been premature and forced, as the contract for the delivery of the 6,251 shares of Chicago West Division Ry. Co. shares allowed them two years from November 11, 1887, in which to make the delivery; and the \$4,100,000 of 1st mortgage bonds, the principal part of the consideration, were not authorized until April 9, 1888, and not delivered to them until May 15, 1888.

A careful scrutiny of all the entries in the books, and con-

sideration of all the circumstances in connection with the issue of the capital stock and bonds, leads me to believe that the sole purpose of the promoters was to gain possession of the entire capital stock of the company in advance of the delivery of the 6,251 shares of West Division stock and the commencement of the work of installing the proposed cable system. The redepositing of \$4,000,000 of the stock under the pretext of guaranteeing the completion of the cable contract was, in effect, the return of that much stock to cover the cost of construction, but the \$6,000,000 retained by the promoters evidently represented their profits.

Sec. 5.—Mr. Yerkes' Interpretation of the Lease.

The precise distinction on the books in recording the issue of the stock to Widener, Elkins and Kemble and the U. S. Construction Co., and the exact division of the stock and bonds between them and for the purposes shown by the books of account, have, in my judgment, no real significance, as all of these parties were, together with the management of the West Chicago St. R. R. Co., practically one and the same institution, with interests in common and controlled by the same motive from long association.

Furthermore, Mr. Yerkes' own explanation of the circumstances accords with this supposition:

"With the object in view of accomplishing a certain end, two contracts were made. That end was that Elkins, Widener and Kemble and the United States Construction Company were to furnish to the West Chicago Street Railroad Company 6,251 shares of West Division stock and a cable plant.

"It was agreed between the parties in interest that for the cable plant the railroad company was to pay \$10,000,000 in cash or stock, and for the 6,251 shares of West Division stock \$4,100,000 of first mortgage bonds.

"At the time the contracts were made the railroad company insisted that \$10,000,000 of stock should be delivered only as the work progressed and on engineers' certificates. This did not suit the plans of Elkins, Widener and Kemble, who insisted that they should receive at least one-half of the stock before the work commenced, so that they could arrange with some of their associates for money.

"Finally the railroad company agreed to give them \$6,000,000 of stock at once and \$4,000,000 of stock as the work progressed.

"The contracts were made in accordance with this arrangement. The contract was made with the construction company for \$4,000,000 of stock, and with Elkins, Widener and Kemble for \$6,000,000 of stock and \$4,100,000 of bonds, the object being to place the matter in such a position that the stockholders of the West Chicago Company could not complain that the stock was delivered before value was received by the railroad company.

"As the construction company and Elkins, Widener and Kemble were the same, they were willing to take it in this way.

"Of course there had to be some consideration given for the delivery of this \$6,000,000 of stock. That consideration was named in the contract as obtaining the lease.

"In making the entries for these different items, the terms of the contracts were held to. Really the agreement was that the railroad should pay \$10,000,000 of stock for the work done.

"I would say, further, that the \$6,000,000 of stock which Elkins and Widener received went to the United States Construction Company, the United States Construction Company using it in payment of the work."

In the absence of the books of the U. S. Construction Co. it is difficult to state what the actual cost of the cable plant was. According to Mr. Yerkes, the cost was \$7,800,000, leaving \$2,200,000 to cover any discount at which the stock may have been disposed of by the Construction Co. and the profit to the promoters.

In the case of the North Chicago St. R. R. cable plant, the actual cost is stated to have been \$4,200,000. In that instance the plant consisted of 11½ miles of single-track road and necessary power houses, etc., while in the case of the West Chicago St. R. R. plant 17.47 miles single track cable road, etc., were built, which at \$7,800,000 would seem to indicate that the difference in cost is approximately in proportion to the difference in mileage. But this is not conclusive, for obvious reasons.

I have made every endeavor to obtain access to the books of the U. S. Construction Co., in order to ascertain the exact cost of both plants, and have suggested that it was in the interests of the companies themselves to show beyond question that the West Side system cost \$7,800,000 and the North Side \$4,200,000, as claimed, but without success.¹

¹ From Mr. J. C. Moore, the present secretary and treasurer of the North Chicago Street Railroad Company, who kept the Chicago books of the United States Construction Company during the period of construction, I learned that most of the purchases of iron and other heavy material and the making and payment of sub-contracts were made directly from the Philadelphia office of the company, and therefore do not appear on the Chicago books; and that the latter books contain the disbursements for labor only, and therefore would afford no satisfactory information as to the total cost. These books were forwarded to Philadelphia when the work was completed. I have asked for these books, nevertheless, or for the privilege of examining the general books of the company in Philadelphia.

Mr. Yerkes consented to my request, and he not only consented but actually produced every book and paper accessible which I have called for, although indisposed to do so in the beginning of my investigation, and, I understand, wrote to Mr. Widener at Philadelphia, requesting for me the privilege of examining the construction company's books. A few days later he informed me that he had received word from Mr. Widener that he (Widener) did not know where the books were.

I am indisposed to believe that Mr. Yerkes has otherwise than stated the truth in this effort to obtain access to the books mentioned, as it is clearly in his interest to produce the records in support of his statements, since the result of my examina-

Sec. 6.—Market Value of West Division Railway Stock.

In the course of my investigation I obtained from Mr. Webb, the secretary, an official statement of the net profits of the Chicago West Division Ry. Co. for the ten months preceding its lease to the West Chicago St. R. R. Co., which seems to show the basis upon which the guaranteed rental of 35 per cent. per annum was afterwards made.

From this statement it would appear that the net profits for the period mentioned were \$364,161.85, or at the rate of 35 per cent. per annum on the capital stock of \$1,250,000. On a 5 per cent. basis this would give the stock a market value of \$700 per share, or an aggregate of \$8,750,000, and 6,251 shares would represent a market value of \$4,375,700.

According to the contract with Widener, Elkins and Kemble, the West Chicago St. R. R. Co. paid \$5,100,000 for 6,251 shares, or at the rate of \$815.86 per share. This accords with the sworn statement of the company filed with the New York Stock Exchange at the time of listing the securities, but is in conflict with Mr. Yerkes' own statement, quoted above, that the \$4,100,000 first mortgage bonds were issued in payment of the 6,251 shares of West Division stock.

Considering the importance of this information in determining the value received by the company in return for its securities, it is necessary to briefly state a few reasons for believing that the average price paid the actual owners of these shares was between \$655 and \$656 per share.

It will be remembered that the West Chicago St. R. R. Co. was not incorporated till July 19, 1887; nevertheless the 1896 issue of the *Economist Street Railway Supplement* states, as coming from re-

tion thus far shows an apparently excessive profit to the promoters of the North and West Side roads. But as it is a matter of public notoriety that for several years he has not been on the most friendly terms with his former colleagues, it is therefore not unreasonable to presume that his influence with them is less than formerly. They certainly cannot have the same motive for submitting their private acts to public scrutiny.

As regards Mr. Yerkes himself, this report will show, without the necessity of making the statement, that I have had access generally to all the facts concerning his companies, and that my examination covers practically their whole history from their inception down to January 1, 1898. In no case have I been satisfied to accept information from him or any of his subordinates except where I have subsequently had the opportunity of verifying it by reference to the records themselves. In all cases where I have received information without such verification, the circumstances are explicitly stated herein, as well as the reasons for introducing it.

liable authority, that one month earlier, or "in June, 1887, negotiations were closed between Chas. T. Yerkes and his associates and the officers of the Chicago West Division Ry. Co., by which Mr. Yerkes acquired 6,251 shares, or one more than a majority of the capital stock outstanding. The price paid was \$650 a share, arrangements being made for the payment of that amount in several installments."

The first proposition presented to the West Chicago St. R. R. Co. for the purchase of these shares was on November 11, 1887, and according to the terms agreed upon, Widener, Elkins and Kemble were given two years in which to make delivery, which would seem to indicate that the desired number of shares was yet to be acquired by them.

As the action of the market price for some time before and after this date has a direct bearing upon the price paid, it may be stated that on June 12, 1886, the quotations on the Chicago Stock Exchange were \$400 per share bid and \$425 asked. These were the ruling quotations for the balance of the year 1886. On May 27, 1887, or one month before the deal was closed, according to the *Economist's* supplement, the price bid was \$475 and \$600 asked. As late as December 30, 1887, the price asked was \$700 per share, with no bidders. This was the highest price asked for the shares at any time up to the close of the year 1887, so far as the public quotations show, and would indicate that if the officers of the Chicago West Division Ry. Co. were in a position to guarantee the delivery of 6,251 shares as early as June, 1887, the price stipulated did not exceed an average of \$656. Even if the transaction was still open after that date, the price, in any event, did not exceed \$700 per share, the highest quotation reached on the Chicago Stock Exchange, if such quotations are any indication of the exchange value of the stock.

As the range of prices asked was from \$600 on May 27, 1887, to \$700 on December 30, 1887, it naturally follows that the average price was between the two, and as \$4,100,000 in bonds was issued on the deposit of 6,251 shares, this would make the average value of each share a little less than \$656, which was undoubtedly the average price paid for it.

A strong reason for presuming that the average price paid for

the stock was the basis for the issue of the bonds is the fact that that was the plan previously adopted in the first issue of bonds by the North Chicago St. R. R. Co.; in fact, the whole general plan of financing both roads was precisely similar except in this single instance, if the assumption set forth above is incorrect.

The statement of Mr. Yerkes that the entire original capital stock of \$10,000,000 was set aside to pay for the cable system, and that the actual cost was \$7,800,000, makes it safe to presume that the usual profit of 20 per cent. was contemplated on the estimated cost. Furthermore, nothing is said in the lease of November 17, 1887, about \$1,000,000 in capital stock being set aside as part payment of the 6,251 shares of West Division stock, all of which seems to show that \$4,100,000 in bonds was issued to provide the funds with which to pay for the 6,251 shares of West Division stock and \$1,000,000 in stock was charged to the cost of these shares, in order to allow the promoters a profit of that amount for negotiating the sale.

However desirous Mr. Yerkes and his associates may have been to secure control of these shares, it is reasonable to suppose that there was a limit to the price they were willing to pay for them, and this limit was undoubtedly the earning power of the road itself. As has already been stated, the net earnings for the first ten months of 1887 were \$364,161.85, or at the rate of 35 per cent. per annum on the capital stock. That rate was actually guaranteed on the 6,249 shares of outstanding free stock, and by depositing the 6,251 shares in trust and issuing \$4,100,000 5 per cent. bonds against them the transaction was equivalent to a guarantee of 35 per cent. on the 6,251 shares also. To have issued \$5,100,000 in bonds would have increased the guarantee more than the property was earning, which would have been to assume a risk inconsistent with sound financiering, particularly as interest had also to be earned on the new capital to be invested in developing the property.

This fact would seem to show more than anything else, that even if Widener, Elkins and Kemble were the actual owners of the entire 6,251 shares, and not merely the holders of an option on all or a portion of them, the price which they paid to obtain them did not exceed \$4,100,000 in the aggregate, and as the \$1,000,000 in

stock paid them (in addition to the \$4,100,000 bonds) did not represent any outlay in money on their part, they could well afford to waive any immediate share in the earnings of the company until such time as, under their management, the property could be made to develop additional earning power.

As only \$14,100,000 in stock and bonds were issued, if \$5,100,000 were paid for the 6,251 shares of Chicago West Division Ry. Co. stock, according to the books, then only \$9,000,000 could have been set aside for the construction of the cable system, which is \$1,000,000 less than Mr. Yerkes claims. And if the presumption is that Mr. Yerkes desires to make the profits of the promoters appear as little as possible, he loses an advantage of \$1,000,000 by adhering to the statement that \$10,000,000 and not \$9,000,000 was the correct amount, for it would seem much more probable that whatever was paid out for the 6,251 shares of West Division stock went to the original owners of that stock than that the promoters added anything to the cost for their own benefit, especially as there was no particular necessity of concealing so comparatively small a sum as \$1,000,000 for what might, under some conditions, be a reasonable charge for their services in securing control of the Chicago West Division Ry. when they were at no pains to conceal a charge of \$5,000,000 for practically the same service in giving expression to that control in a formal lease of the road.

Sec. 7.—Value of West Chicago Street Railway Stock.

Considering that the earnings of the road were fully mortgaged by the guaranteed rental of 35 per cent. on the capital stock of the Chicago West Division Ry., leaving the prospective increase in earnings to take care of the \$10,000,000 new capital of the West Chicago St. R. R. Co., it has suggested itself to me that possibly the last named stock was not considered as worth par at the time of its issue, or, if sold in the market to provide funds to construct the proposed cable system might not have realized the full \$10,000,000 in cash.

Such a supposition finds no support in the official records of the Chicago Stock Exchange, as the earliest quotation of the stock of the West Chicago St. R. R. Co. was on June 14, 1889, to-wit: 103 asked and 102½ bid. There is nothing to show that it possessed any lower value at any time previous unless such an assumption

may be drawn from the report of the treasurer of the company for the year 1888, read at the annual meeting of the stockholders on January 8, 1889, viz:

Capital stock, including \$4,000,000 United States Construction Company, held to complete contract.....	\$10,000,000
Bonded indebtedness	4,100,000
C. W. Div. Ry. rental	\$437,500
" " interest	210,500
" " maintenance	3,000
Fixed charges	\$651,000
Receipts, 1888	\$2,846,395.74
Expenses, 1888	2,890,302.05
Deficit	\$43,906.31
Cash on hand January 1, 1888.....	\$185,373.71
Less deficit	43,906.31
Balance on hand January 1, 1889.....	\$141,467.40

This report, however, does not indicate the true condition of the company, nor agree with the books of the company, which show that the gross receipts and operating expenses of the company were as follows:

Gross receipts	\$2,835,002.35
Operating expenses	1,846,337.23
Net from operation	\$988,665.12
Deduct interest and rentals.....	651,994.40
Net earnings	\$336,670.72

Out of these earnings dividends had been paid at regular intervals during the year as follows: April 28, 1888, $1\frac{1}{4}$ per cent.; July 26, 1888, $1\frac{1}{4}$ per cent.; November 5, 1888, $1\frac{1}{4}$ per cent.; and at the meeting of the directors on February 11, 1889, a further dividend of $1\frac{1}{4}$ per cent. was paid, thereby establishing the stock as a 5 per cent. per annum dividend paying security as early as April 28, 1888.

Considering that the construction contract provided that work on the cable system should commence within 30 days of the granting of permission by the City of Chicago, and that such permission was not issued till March 30, 1888, or accepted by the company till April 2, 1888, it is very evident that the stock had an established par value, if not higher, before a dollar of it was disposed of for the purpose of providing funds for the construction of the cable system.

CHICAGO STREET RAILWAYS.

577

Sec. 8.—Capital Expenditures, 1887-1897.

The total expenditures of this company other than operating expenses, that is, the sum expended in the purchase of property, construction and reconstruction of roads, buildings, etc., from date of organization down to December 31, 1897, were \$29,615,628.13, distributed as follows:

Chicago Passenger Railway.....	\$1,156,749.52
Chicago West Division Railway.....	14,969,998.38
West Chicago Street Railroad.....	13,488,880.23
Total	\$29,615,628.13

The following schedules show the details for each of the roads named:

CHICAGO PASSENGER RAILWAY.

2.836 miles single track horse road, converted into cable road by the U. S. Construction Company; contract price per mile, \$164,723.65...	\$466,056.28
0.314 mile single track new cable road, at \$139,221.37.....	43,715.51
4.396 miles S. T. new horse road, at \$23,825.68.....	104,737.66
2.01 miles S. T. horse road converted into trolley road, at \$24,204.17....	48,650.39
26.575 miles horse road, S. T., converted into trolley, at \$18,573.46.....	493,589.68
Total	\$1,156,749.52

CHICAGO WEST DIVISION RAILWAY COMPANY

13.404 miles single track horse road converted into cable road by U. S. Construction Company, at \$164,723.65.....	\$2,207,955.82
11.655 miles single track new cable road, built by West Chicago Street Railroad Company, at \$96,455.43.....	1,124,188.06
0.321 mile single track new cable road, at \$139,221.37.....	44,690.05
1.96 miles single track new horse road.....	46,698.51
68.68 miles single track new horse road converted into trolley road, at \$11,985.48	825,163.04
Western avenue electric power house.....	520,455.65
Halsted street car house improvements.....	11,803.70
New building, Clybourn Place.....	52,839.50
Miscellaneous items	36,204.05
Total expenditures for betterments.....	\$4,869,998.38
Add payments to Widener, Elkins & Kemble—	
For controlling interest in the stock of the Chicago West Division Railway Company	5,100,000.00
For securing lease of the Chicago West Division Railway Company.....	5,000,000.00
Total	\$14,969,998.38

WEST CHICAGO STREET RAILROAD.

1.23 miles single cable road, built by U. S. Construction Company; contract price, \$164,723.65 per mile.....	\$203,710.09
Three power houses and machinery, built by U. S. Construction Co.....	998,277.81
155 grip cars, built by U. S. Construction Company.....	124,000.00

50.32 miles single track horse road, built by West Chicago Street Railroad Company, at \$22,499.57.....	1,132,178.36
25.97 miles single track new trolley road, built by West Chicago Street Railroad Company, at \$18,573.46.....	482,352.76
50.32 miles single track horse road converted into trolley road, at \$11,985.48	601,109.45
Miscellaneous items charged to construction account—	
Taylor street bridge.....	\$100,000.00
Taylor street viaduct.....	7,654.55
Halsted and Kedzie street viaducts.....	2,427.88
Ogden avenue viaduct.....	7,861.90
Milwaukee avenue viaduct.....	1,000.00
Steel rails and asphalt for Madison street.....	52,376.18
Franchise petitions	207,321.37
Interest and dist. on bonds.....	282,972.12
	661,614.00
Equipment—	
Horse cars	\$29,030.00
Grip cars, trailers, etc.....	962,956.01
Electrical equipment	764,956.10
	1,756,942.11
Machinery—	
Blue Island avenue power house.....	\$173,240.47
Van Buren street power house.....	116,627.53
Desplaines street power house.....	72,971.60
Washington street power house improvements.....	54,685.68
Miscellaneous	53,455.65
	470,981.02
Electrical conduits, Western avenue.....	79,112.64
Miscellaneous property in use—	
Car heaters	\$32,944.56
Registers	43,638.95
Storehouse supplies	9,058.63
Horses	29,902.50
Telephone and signal system.....	3,483.80
Car shop stock.....	21,108.27
Cables	112,285.39
Punches	69.70
Gripmen's tools.....	182.54
Hay	142.94
	252,817.28
Advance to feeder lines and connections—	
Cicero & Proviso Street Railway Company.....	\$159,510.10
Ogden Street Railway Company.....	308,662.42
Lake Street Elevated Railroad Company.....	20,077.15
Chicago & Jefferson Urban Transit Company.....	7,911.23
Suburban Railroad Company.....	18,139.31
North Chicago Street Railroad Company.....	46,586.65
North Chicago Electric Railway Company.....	15,250.76
Chicago Electric Transit Company.....	931.22
West Chicago Street Railroad Tunnel Company.....	118,236.45
	785,305.29
Accounts receivable—	
Naugle, Holcomb & Co.....	\$856.07
City of Chicago.....	2,595.25
Suspense	8,980.75
Sinking fund.....	31,000.00
Central Trust Company of New York, to redeem certificates of Ind.....	840,394.44

CHICAGO STREET RAILWAYS.

579

Central Trust Company of New York to redeem coupons	129,000.00	
Bank of America, New York, to redeem coupons.....	2,850.00	
Track depression.....	12,244.48	
		<u>1,027,920.99</u>
Bills receivable.....		86,969.98
Stocks and bonds—		
West Chicago Street Railroad Debentures.....	\$3,211,000.00	
Chicago & Jefferson Urban transit bonds.....	54,000.00	
West Chicago Railroad Consols.....	15,000.00	
West Chicago Railroad stocks.....	22,264.00	
		<u>3,302,264.00</u>
Real estate and buildings—		
Prior to introduction of trolley system—		
For cable roads.....	\$644,084.59	
For horse roads.....	173,681.77	
	<u>\$817,766.36</u>	
Less charge to Chicago Western Division Railroad Company	\$64,643.20	
		<u>\$753,123.16</u>
Since introduction of trolley system.....	\$670,963.48	
Miscellaneous improvements.....	96,557.98	
Special assessments.....	2,679.83	
		<u>\$ 1,523,324.45</u>
Total		<u>\$13,488,880.23</u>

Of the property represented by the above expenditures there existed December 31, 1897, the following items at their original cost value:

CHICAGO PASSENGER RAILWAY.

2.836 miles single track cable road built by United States Construction Company; contract price, \$164,723.65 per mile; estimated price, \$96,455.43 per mile.....	\$273,547.60
0.314 mile single track cable at \$139,221.37.....	43,715.51
2.01 miles single track trolley at \$24,204.17.....	48,650.39
26.575 miles single track trolley at \$18,573.46.....	493,589.68
Total	<u>\$859,503.18</u>

Showing a depreciation of \$297,246.34 as follows: 4.396 miles new horse road torn up and trolley road built in its place; original cost of horse road, 4.396 miles, at \$23,825.68, total \$104,737.66, and \$192,508.68 difference between contract price and estimated cost of 2.836 miles cable road built by U. S. Construction Co.

CHICAGO WEST DIVISION RAILWAY.

13.404 miles single track cable road built by U. S. Construction Company; contract price, \$164,723.65 per mile; estimated, \$96,455.43 per mile	\$1,292,888.56
11.655 miles single track cable road built by West Chicago Street Railroad Company; actual cost per mile, \$96,455.43.....	1,124,188.06
0.321 mile single track cable road built by West Chicago Street Railroad Company; actual cost at \$139,221.37.....	44,690.03

68.68 miles single track trolley road converted from horse road; actual cost of converting, \$11,985.48.....	825,163.04
Western avenue power house, building.....	\$155,535.55
Western avenue power house, machinery.....	364,920.10
	<hr/>
Halsted street car house improvements.....	520,455.65
New building, Clybourn Place.....	11,803.70
	<hr/>
Total	\$3,872,028.56

Showing a depreciation of \$11,097,969.82 as follows:

Difference in contract price and estimated cost of the 13.404 miles cable road built by the U. S. Construction Company.....	\$915,067.26
1.96 miles single track horse road converted into trolley road; original cost of horse road, \$23,825.68 per mile.....	46,668.51
Miscellaneous expenditures covered by the above values.....	36,204.05
Price paid Widener, Elkins & Kemble for 6,251 shares of Chicago West Division Railway Company stock; omitted as an asset for reasons that will appear later.....	5,100,000.00
Price paid Widener, Elkins & Kemble for negotiating the lease of the Chicago West Division Railway Company to the West Chicago Street Railroad Company.....	5,000,000.00
	<hr/>
Total	\$11,097,969.82

WEST CHICAGO STREET RAILROAD.

1.23 miles single track cable road built by U. S. Construction Company; contract price, \$164,723.65 per mile; estimated price per mile, \$96,455.43.....	\$118,640.18
25.97 miles single track new trolley road, complete, including street paving, at \$18,573.46.....	482,352.76
50.32 miles single track trolley road converted from horse road; actual cost of converting same, \$11,985.48 per mile. Total, \$601,109.45.	
50.32 miles of street pavement relaid, originally part of 50.32 miles single track horse road torn up and replaced with trolley road. Total square yards, 236,168, divided as follows:	
19,712 square yards Granite at \$2.00.....	\$39,424.00
23,607 square yards Cobble at 1.25.....	29,508.75
192,849 square yards Wood at 1.00.....	192,849.00
236,168	Total.....
Add cost of converting above.....	\$261,781.75
50.32 miles single track trolley, complete, at \$17,148.08.....	862,891.20
Equipment on hand December 31, 1897—	
364 box cars at \$900.....	\$327,600
421 open cars at \$725.....	305,225
258 grip cars at \$650.....	167,700
401 box motor cars at \$1,000.....	401,000
415 open motor cars at \$825.....	342,375
1 trolley party car, \$1,200.....	1,200
5 mail cars at \$900.....	4,500
36 sweepers at \$300.....	10,800
49 snow plows at \$400.....	19,600
35 salters at \$200.....	7,000

7 sprinklers at \$250.....	1,750
60 other vehicles at \$100.....	6,000
	<u>1,594,750.00</u>

(The details of the remaining items, as well as the totals, are the same as in the schedule of expenditures given on a preceding page, nothing being marked from the original.)

Machinery	\$470,981.02
Electric conduits, Western avenue.....	79,112.64
Three power houses and machinery built by U. S. Construction Company (see estimate).....	998,277.81
Miscellaneous property in use.....	252,817.28
Due from feeder lines and connections.....	785,305.29
Accounts receivable.....	1,027,920.99
Bills receivable.....	86,969.98
Stocks and bonds.....	3,302,264.00
Miscellaneous real estate and buildings.....	1,523,324.45
Total	<u>\$11,585,607.60</u>

Total expended, West Chicago Street Railroad Company.....	\$13,488,880.23
Total cost value of property existing December 31, 1897.....	<u>11,585,607.60</u>

Depreciation	<u>\$1,903,272.63</u>
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Following are the details of the depreciation:

Difference in contract price and estimated cost of the 1.23 miles single track cable road built by the U. S. Construction Company.....	\$85,069.91
50.32 miles single track horse road converted into trolley road; original cost, \$1,132,178.36. Deduct for street pavement relaid..	<u>\$261,781.75</u>
	870,396.61
Depreciation in equipment.....	286,192.11
Miscellaneous items charged to construction account.....	661,614.00
Total	<u>\$1,903,272.63</u>

SUMMARY.

	Total expenditures.	Cost value assets December 31, 1897.	Depreciation.
Chicago Passenger Railway....	\$1,156,749.52	\$859,503.18	\$297,246.34
Chicago West Division Railway.	14,969,998.38	3,872,028.56	11,097,969.82
West Chicago Street Railroad..	13,488,880.23	11,585,607.60	1,903,272.63
Totals	<u>\$29,615,628.13</u>	<u>\$16,317,139.34</u>	<u>\$13,298,488.79</u>

Sec. 9.—Financial Condition, 1897.

The lease of March 15, 1889, with the Chicago Passenger Ry. stipulated that the 2.836 miles horse road of that company converted into cable road was to be paid for by the West Chicago St. R. R. Co. The contract price paid the U. S. Construction Company for converting the road was \$164,723.65 per mile, or \$466,056.28, and this amount should be transferred in the above summary from the Chicago Passenger Ry. account to that of the West

Chicago St. R. R., leaving the cost value \$273,547.60 to stand, as it is, in the second column, since the improvement accrues to the first named company.

The \$5,100,000 representing the 6,251 shares of the Chicago West Division Ry. Co. and the \$5,000,000 paid for negotiating the lease of that company should likewise be transferred in the summary from the Chicago West Division Ry. account to that of the West Chicago St. R. R.

There should also be taken into account the settlement by arbitration May 9, 1896, between the Chicago Passenger Ry. Co. and its lessee, by the terms of which the former company was charged with \$250,000 as its proportion of the Western Ave. electric power house, and the fact that that company actually paid to the lessee company \$891,534.75, part of which was on account of the award mentioned, although the improvement was actually to the property of the Chicago West Division Ry. Co.

With the changes noted a new summary would be as follows:

SUMMARY NO. 2.			
	Expenditures.	Cost value assets.	Appreciation.
Chicago Passenger Railway....	\$49,158.49	\$859,503.18	\$810,344.69
Chicago West Division Railway	4,869,998.38	3,872,028.56	997,969.82
West Chicago Street Railroad..	23,804,936.51	11,585,607.60	12,219,328.91
Total	\$28,724,093.38	\$16,317,139.34	\$12,406,954.04

It will be remembered that at the time of the lease of the balance in the hands of the West Chicago St. R. R. Co. on December 31, 1897, the sum will represent the total book-value of the assets of that company on the date mentioned.

If to the total of the first column is added the \$353,972.19 cash Chicago Passenger Ry. there was turned over to the West Chi. St. R. R. Co. real estate and buildings representing a cost value of \$661,202.99, and subsequently another piece of property costing \$100,000, making a total of \$761,202.99, representing real estate and buildings, still in the possession of the lessee company December 31, 1897.

There was also transferred 29.79 miles single track horse road, representing a cost value of \$709,767.01, of which 2.38 miles only, representing a cost value of \$56,705.12, remained on December 31, 1897.

There was also 98.45 miles single track horse road of the Chicago West Division Ry. transferred at the date of the lease of that road by the West Chicago St. R. R. Co., of which 6.26 miles, representing a cost value of \$123,046.43, remained in existence December 31, 1897.

The real estate and buildings of the Chicago West Division Ry. Co. existing at the date of the lease, and still in the possession of the West Chicago St. R. R. Co. on December 31, 1897, represented a cost value of \$449,158.73 and \$927,984 respectively. In the subsequent conversion of part of the old horse road into trolley road, 7.97 miles of granite pavement, 16.603 miles wood and 44.107 miles of cobble pavement, representing an aggregate cost value of \$411,495.93, was relaid and now forms part of the present trolley road.

If these items were incorporated into the above summary they would produce the following result, viz:

SUMMARY NO. 3.			
	Book value assets.	Cost value.	Depreciation.
Chicago Passenger Railway....	\$49,158.49	\$1,677,411.29	\$1,628,252.80
Chicago West Division Railway.	4,869,998.38	5,783,713.65	913,715.27
West Chicago Street Railroad..	24,158,908.70	11,585,607.60	12,573,301.10
Totals	\$29,078,065.57	\$19,046,732.54	\$10,031,333.03

The cost value of the assets of the two lessor companies are apparently in excess of the book value, according to the last summary, but this is because the first column shows the liabilities of these companies to the West Chicago St. R. R. Co. only, whereas, if the remaining liabilities are considered, the result would be as follows:

SUMMARY NO. 4.			
	Total Liabilities.	Cost value of Properties.	Deficit.
Chicago Passenger Railway....	\$3,123,458.49	\$1,677,411.29	\$1,446,047.20
Chicago West Division Railway.	10,189,998.38	5,783,713.65	4,406,284.73
West Chicago Street Railroad..	28,358,252.67	11,585,607.60	16,772,645.07
Totals	\$41,671,709.54	\$19,046,732.54	\$22,624,977.00

The liabilities in detail are as follows:

	Chi. Pass. Ry. Co.	Chi. W. Div. Ry. Co.	W. Chi. St. R. R. Co.
Capital stock.....	\$1,340,300.00	\$1,250,000.00	\$13,189,000.00
First mortgage bonds.....	400,000.00	4,070,000.00	3,969,000.00
Consol mortgage bonds.....	1,334,000.00	.....	6,031,000.00

Certificates of Ind.:

June 1, 1891.....	.....	.....	\$2,000.00
December 1, 1891.....	.....	.....	3,000.00
December 1, 1894.....	.....	.....	3,937,000.00
Due W. Chicago St. Railroad..	49,158.49	4,869,998.38	.....
Miscellaneous .....	.....	.....	1,227,252.67
Totals	\$3,123,458.49	\$10,189,998.38	\$28,358,252.67

It will be noticed that the bonded indebtedness of the Chicago Passenger Ry. Co. and of the West Chicago Street R. R. Co. is greater than the value of the property mortgaged to secure its payment, and that while the cost value of the property of the Chicago West Division Ry. Co. is \$1,713,713.65 in excess of the bonded indebtedness of that company, this excess falls \$3,156,284.73 short of being sufficient to liquidate the claim of the West Chicago St. R. R. Co. for \$4,869,998.38 expended for betterments to the property of the Chicago West Division Ry. Co. It will also be noticed that the assets of neither of the three roads are sufficient to pay their bonded and floating indebtedness and leave any residue for the redemption of the capital stock, as will be seen by the following statement:

	Bonds and floating debt.	Cost value of property.	Deficit.
Chicago Passenger Ry. Co.....	\$1,783,158.49	\$1,677,411.29	\$105,747.20
Chicago West Division Railway	8,939,998.38	5,783,713.65	3,156,284.73
West Chicago Street Railroad..	15,169,252.67	13,299,321.25	1,869,931.42
Totals	\$25,892,409.54	\$20,760,446.19	\$5,131,963.35

Add to this the capital stock and we have the total deficit as follows:

	Deficit as above.	Capital stock.	Total deficit.
Chicago Passenger Ry. Co.....	\$105,747.20	\$1,340,300.00	\$1,446,047.20
Chicago West Division Railway.	3,156,284.73	1,250,000.00	4,406,284.73
West Chicago Street Railroad..	1,869,931.42	13,189,000.00	15,058,931.42
Totals	\$5,131,963.35	\$15,779,300.00	\$20,911,263.35

Sec. 10.—Cost of Cable Construction.

As already fully explained on a preceding page, it has been necessary to estimate the detailed cost of the original cable system, built under contract by the U. S. Construction Co., in order to complete the foregoing summary, and as the cost thus incorporated is not conclusive, and at best only approximates the actual cost, it may not be out of place to submit for consideration at this time the following facts upon which the estimate in detail is based:

The lease of October 20, 1887, provided for the construction of "at least 17 miles" of fully equipped and operative cable road, with all the necessary power houses, machinery and equipment. The books of the West Chicago St. R. R. Co. show that \$4,000,000 was paid to the U. S. Construction Co. for the system complete, and the payment is represented in the books by the single entry of that amount to the debit of construction account. No details are given in the books, nor have I been able to find on file any schedule of any character from which to make up a list of the property transferred and its cost value, either in detail or bulk.¹ At the same time, such estimates as have been incorporated into this report are approximately correct, and, therefore, do not detract materially from the value of the report itself.

In one sense these estimates are preferable to the records themselves, as the singular fact is presented of Mr. Yerkes disputing the official records of his own company. In other words, the records show that \$4,000,000 was paid to the U. S. Construction Co. for the original West Side cable system, whereas Mr. Yerkes states that the actual cost was \$7,800,000. Where authorities disagree in this manner, estimates are not only permissible but necessary.

From the records of the engineers' department, I learn that the U. S. Construction Co. built 17.47 miles single track cable road, and from other sources I find that three power houses, with necessary machinery, were also built by that company. Finally, if it is assumed that all the grip cars now in use on the Madison St. and Milwaukee Ave. cable system, or a like number, were originally built by the U. S. Construction Co., practically all the construction work done by that company will be covered.

Subsequently, and without the intermediation of any construction company, the West Chicago St. R. R. Co. built the Blue Island Ave., Halsted and Van Buren St. cable system, the detailed

¹ The absence of any such record does not necessarily imply any irregularity in the accounts of the West Chicago Street Railroad Company, as such details, under the circumstances, would naturally be found only in the books of the U. S. Construction Company, but, as access to these books has been denied, or rather their whereabouts stated to be unknown, and as the information which they contain is absolutely essential to a correct and perfect understanding of the situation, no option is presented but to supply any deficiency in figures with well considered estimates, or else abandon any attempt to arrive at a satisfactory conclusion altogether.

cost of which is clearly set forth in the books of account of that company.

A comparison of the mileage of the two systems referred to shows that 40 per cent. of the total cable lines on the West Side compose the Blue Island Ave., Halsted and Van Buren St. system. This system is operated by two power houses, the cost of which, including machinery, was \$665,484.94.

Assuming that the same ratio of power to mileage is required on the section built by the U. S. Construction Co. as on the section built by the West Chicago St. R. R. Co. itself, and that a corresponding ratio obtains in the relative cost of the power plants, the cost of the three power houses and machinery built by the U. S. Construction Co. would be approximately \$998,277.81, exclusive of the land, which, under the contract, was to be provided by the R. R. Co.

There is good reason to believe that this is a high estimate and that the actual cost was much less, as a brief description of the several power houses will show.

In the Washington street power house are "two simple, non-condensing engines, 36x60 inches, 1,000 horse power each," to quote from a semi-official publication of the company. One of these engines is held in reserve, while the other operates the Washington street tunnel and State street loop cable.

In the Milwaukee avenue power house are two Corliss engines, 36x72, 1,000 horse power each. Two 20 feet diameter fly wheels, weighing 75,000 pounds each. One of the engines is held in reserve, as in the Washington street power house.

In the Rockwell street power house are two engines, 1,400 horse power each. The same publication referred to above speaks of these three power houses as follows: "The three power houses mentioned above, having been built at the same time, are very similar in design; the one at Rockwell street is almost an exact duplicate of the Milwaukee avenue plant."

In another place this publication refers to the Blue Island avenue power plant, calling particular attention to the fact that "the part of the building where the machinery is located is 116x100 feet," and that "the site was an extremely difficult one on which to erect a heavy building. Quick-sand was encountered and the excavations for the foundations had to be extended 40 feet below the surface of the street. Eight hundred thousand brick, laid in Portland cement, were used in the engine foundations alone. The station is one of the most complete cable plants ever built, and embodies all the improvements that had been made in the other Chicago cable power houses, as well as those of San Francisco, Philadelphia, etc."

Three cables are operated from this power house by "two Allis engines, 40x72 inches each, being rated at 1,800 horse power under steam pressure of 100 pounds. The fly wheels are 24 feet in diameter and weigh 100,000 pounds each."

The Van Buren street power house is rated second to the Blue Island avenue power house by the same publication, having two Allis engines 30x60 inches each,

1,300 horse power, fly wheels weighing 100,000 pounds each and measuring 20 feet in diameter.

It is more than probable that the cost of the last two power houses, viz: \$665,484.94, equalled the cost of the other three; the estimate of \$998,277.81, however, is consistent with the mileage operated, and does no injustice to the company in an effort to establish the first cost of the original cable plant, since the accounts giving the actual cost are not produced.

The electric plant for the Washington St. tunnel is situated in the Washington St. power house and included in the estimated cost of that structure. No material improvements were made to the tunnel proper by the U. S. Construction Co., beyond the paving and laying of the cable track, all of which cost is included in the cost of the general mileage of 17.47 miles single track cable built by the Construction Co. The actual reconstruction of the tunnel was done in 1892 and 1893, and cost \$28,752.96, which was paid for by the Chicago Passenger Ry. Co. independent of the original construction contract of November 17, 1887.

There remains only to estimate the equipment furnished by the U. S. Construction Co. to complete the expenditures made by that company under the construction contract. Of the 258 grip cars now owned by the West Chicago St. R. R. Co., 40 per cent. are doubtless required for the Blue Island Ave. and Van Buren St. system, leaving 155 for the Madison St. and Milwaukee Ave. lines. The cost of grip cars on the Chicago City Ry. Co. in 1882, was \$836.58 each, and in 1888 \$819.71 each. Assuming the cost in 1890 to have been \$800, and that all the grip cars now operated by the Madison St. and Milwaukee Ave. systems, or a like number, were built by the U. S. Construction Co., the cost of 155 would be \$124,000.

It is fair to assume that no passenger cars were furnished by the U. S. Construction Co., as I find a charge on the books of the company of \$174,188.92 for that purpose; \$16,539.20 in 1888, \$49,976.71 in 1889, and \$107,673.01 in 1890, which, on an average of \$731 for open cars and \$1,055 for closed cars, would provide 200 new cars, in addition to the 793 cars received from the Chicago West Division Ry. Co. In 1891, \$57,789.77 was paid out for new cars, and in 1892 \$345,630.60, all independent of any cars that may have been furnished by the U. S. Construction Co.

Comparing the mileage and traffic of the company to-day and its 1,865 cars with the mileage and traffic in 1890, the 993 cars accounted for above were amply sufficient to operate the road at that time.

Deducting the estimated cost of the power house and machinery and equipment (\$1,122,277.81) from the total \$4,000,000 paid under the contract, leaves \$2,877,722.19 to cover the cost of the 17.47 miles single track cable road built, which would be at the rate of \$164,723.65 per mile. That this is greatly in excess of the cost actually incurred by the U. S. Construction Co. may be inferred from several facts that are clearly established by the records of the several companies.

(1) The actual cost of the 17.898 miles of cable road on the South Side, north of 39th St., including the down-town loop, was \$1,470,868.27, or at the rate of \$82,180.60 per mile.

(2) Six miles of single track cable road extension subsequently built on State St. south of 39th St. cost \$330,042.82, or at the rate of \$55,006.80 per mile, and 9.687 miles single track cable extension south on Cottage Grove Ave. cost \$575,408.63, or \$59,400.09 per mile.

(3) The actual cost of the 11.655 miles single track cable road constituting the Blue Island Ave., Halsted and Van Buren St. line, including the Adams St. loop, was \$1,124,188.06, or at the rate of \$96,455.43 per mile, according to the books of the West Chicago St. R. R. Co.

(4) The State St. loop extension of the West Chicago St. R. R. Co. cost \$88,405.56, or at the rate of \$139,221.37 per mile, and the cost of the 0.667 mile single track cable road built by the Chicago City Ry. Co. in the construction of its new loop on Michigan Ave. was \$57,025.71, or at the rate of \$85,495.82 per mile.

(5) The contract price for the construction of the 4.459 miles single track cable road on Clybourne Ave. from the terminus near Fullerton Ave. to Division St., and on Division St. to the junction with the cable line on Wells St., at that point, including an underground conduit from that point continuing on Division St. to North Clark St., and thence South, connecting with the power house on North Clark St., was \$500,000. Making no allowance for the 4,000 lineal feet of cable conduit, but apportioning the entire sum to the

4459 miles single track cable road, makes the average cost per mile \$112,132.77. This contract was taken by the U. S. Construction Co.

If a comparison of the cost of the different sections of cable road referred to above does not prove conclusively that the actual cost of the 17.47 miles single track cable road built by the U. S. Construction Co. for the West Chicago St. R. R. Co. was less than \$164,723.65 per mile, the contract price, it at least shows that the cost was not \$6,677,722.19, or \$382,240 per mile single track, which would be the rate per mile if \$7,800,000 was the actual cost of the system, according to Mr. Yerkes.

To show more clearly the extreme improbability that \$382,240 was the actual cost per mile, it is only necessary to call attention to the fact that at that rate one average mile of cable road on the West Side cost \$52,197.18 more than the six miles of cable road on State St. South of 39th St.; more than six times as much per mile as the cable road on Cottage Grove Ave. south of 39th St.; nearly five times as much per mile as the first experimental section of cable road built in Chicago, with all the subsequent expenditures for changes and improvements to bring it up to its present degree of efficiency; more than four times as much per mile as a road of a precisely similar character built according to the same specifications by the West Chicago St. R. R. Co. itself; \$100,000 per mile more than the State St. loop extension built by the same company; and nearly five times as much per mile as the Michigan Ave. loop extension of the Wabash Ave. line, both of which extensions, because of their location in the business district, where the sewer, gas and water pipe obstructions are the greatest, show a cost of construction much greater than in outlying sections of the city; finally, \$82,000 per mile more than the *contract* price with the same Construction Company for the construction of the entire cable system on the North Side, including all power houses and machinery, the construction of the Wells St. and Clark St. bridges, and the reconstruction of the Dearborn St. bridge and La Salle St. tunnel, etc., etc.¹

¹ Reference might also be made to the following answer of the West Chicago Street Railroad Company to an inquiry of the Civic Federation as to the cost per mile of their cable road, to-wit: "Estimated cost per mile of track (cable), including rails, conduits, pulleys, vaults, and necessary machinery for operating the same, \$75,000 single track."

Of the entire 17.47 miles single track cable road built by the U. S. Construction Co. only 1.23 miles were West Chicago St. R. R. Co. mileage, the balance being 2.836 miles Chicago Passenger Ry. Co. and 13.404 miles Chicago West Division Ry. Co.

Sec. 11.—Construction Charges in Detail.

The total charges to construction account between October 20, 1887, and December 31, 1894, or prior to the introduction of the trolley system, aggregated \$7,002,390.87, divided as follows:

17.47 miles single track original cable system, including buildings, machinery, equipment, etc., built by U. S. Construction Company,	
\$4,000,000, divided as follows:	
13.404 miles Chicago West Division Railway Company.....	\$2,207,955.82
2.836 miles Chicago Passenger Railway Company.....	466,056.28
1.230 miles West Chicago Street Railroad Company.....	203,710.09
17.470 miles. Total at \$164,723.65.....	\$2,877,722.19
Three power houses and machinery.....	998,777.81
155 grip cars.....	124,000.00
Total	\$4,000,000.00

As already explained the agreement of March 15, 1889, with the Chicago Passenger Ry. Co. stipulates that the cost of converting the 2.836 miles old horse track of the Chicago Passenger Ry. Co. into cable road was to be paid by the West Chicago St. R. R. Co., so that of the total \$4,000,000 paid to the U. S. Construction Co. under the original cable contract \$1,792,044.18 was chargeable to the West Chicago St. R. R. Co. and \$2,207,955.82 to the Chicago West Division Ry. Co.

Taken in connection with their answer to a more general inquiry as to the cost of all building and equipping of new lines and extension, to-wit: "It is impossible to give statement as asked for itemized, as the construction and equipping of new lines has been charged to the general construction account," would seem to indicate that the officials of the West Chicago Street Railroad Company have apparently no clearly defined idea themselves as to the actual cost value of their property, or at least have not yet fully determined upon a uniform answer to all inquiries.

Their estimate of \$75,000 per mile for cable road, while more reasonable than the contract price of \$164,723.65 or the price indirectly stated by Mr. Yerkes, \$382,240, is unreliable and of no more value than their estimate of the average cost of trolley road, to-wit: "Estimated cost per mile of track (electric), including rail construction, bonding, poles, and all necessary wiring, together with a complete feeder system and necessary underground electric conduits, \$50,000 single track," as the books themselves show that the cost to construct the latter kind of road is less than half their estimate. Elsewhere in this report reasons are fully set forth why the actual cost per mile single track of the Blue Island avenue and Halsted street and Van Buren street lines, to-wit: \$66,455.43, should be accepted as a safe estimate of the cost of the Madison street and Milwaukee avenue cable lines, and that amount has been adopted as the approximate cost per mile of the cable road, built by the U. S. Construction Company, in preparing the final schedule of the cost value of the existing property of the company.

Subsequently 0.635 mile single track cable road was built at a cost of \$58,405.56, or at the rate of \$139,221.27 per mile, and 11.655 miles single track at a cost of \$1,124,188.06, or at the rate of \$96,455.43 per mile, and charged as follows:

0.314 mile Chicago Passenger Railway Company.....	\$43,715.51
0.321 mile Chicago West Division Railway Company.....	44,690.05
11.655 miles Chicago West Division Railway Company.....	1,124,188.06

Total \$1,212,593.62

56.676 miles single track horse road was also built as follows:

4.396 miles Chicago Passenger Railway Company.....	\$104,737.66
1.96 miles Chicago West Division Railway Company.....	46,698.51
50.32 miles West Chicago Street Railroad Company.....	1,132,178.36

Total \$1,283,614.53

During the same period there was also charged into construction account, as already stated, the following items:

Taylor street bridge.....	\$100,000.00
Taylor street viaduct.....	7,654.55
Halsted and Kedzie street viaducts.....	2,427.88
Ogden avenue.....	7,861.90
Madison street new steel rails and asphalt.....	52,376.18
Franchise petitions.....	207,321.37
Interest and discount on bonds.....	128,540.84

Total \$506,182.72

To recapitulate, the \$7,002,390.87 charged to construction account between October 20, 1887, and December 31, 1894, as stated above in detail, was on the following accounts:

Chicago Passenger Railway Company.....	\$148,453.17
Chicago West Division Railway Company.....	3,423,532.44
West Chicago Street Railroad Company.....	3,430,405.26

Total \$7,002,390.87

Subsequently there was charged to construction account \$2,605,296.60 on account of the construction of 173.555 miles single track electric roads, including the conversion of old horse roads into electric roads, as follows:

2.01 miles Chicago Passenger Railway Company at \$24,204.17...	\$48,650.00
26.575 miles Chicago Passenger Railway Company at \$18,573.46...	493,589.00
28.585 miles total Chicago Passenger Railway.....	\$542,240.00
25.970 miles West Chicago Street Railroad Company at \$18,573.46 (estimated)	482,352.00

54.555 miles total new electric road..... \$1,024,592.00

119.00 miles single track horse road converted into electric road at \$11,985.48 per mile, \$1,426.272.49, divided as follows:

68.68 miles Chicago West Division Railway Company.....	\$825,163.04
50.32 miles West Chicago Street Railroad Company.....	601,109.45
119. miles. Total	\$1,426,272.49

Into the same account was also charged \$154,431.28 for interest and discount on bonds.

Following is a summary of the total charges to construction account down to December 31, 1897:

Account Chicago Passenger Railway Company.....	\$690,693.24
Account Chicago West Division Railway Company.....	4,248,695.48
Account West Chicago Street Railroad Company.....	4,668,298.75
Total	\$9,607,687.47

It will be noticed that of the total expenditures to December 31, 1897, it has been necessary to estimate only the cost of 25.970 miles of new trolley road built for the Chicago West Division Ry. Co. The basis for this estimate is the rate per mile for road of a precisely similar character built in the same year for the Chicago Passenger Ry. Co. and made the subject of arbitration, as fully set forth elsewhere in this report.

Deducting the amount named in this report of the arbitrators as chargeable to the Chicago Passenger Ry., to-wit: \$542,240.07, and the amount estimated above for the 25.970 miles of road chargeable to the Chicago West Division Ry. Co., also the item of \$154,431.28 for interest on bonds, leaves a balance of \$1,426,272.49 out of the total \$2,605,296.60, to cover the cost of converting 119 miles of horse road into trolley, which would be at the rate of \$11,985.48 per mile.

As this rate is approximately the cost per mile of similar roads on the North and South side lines, *exclusive of paving*, it is assumed that in the conversion of the 119 miles of horse road mentioned the old pavement already down was allowed to remain, and thus its original cost value became incorporated into the total cost value of the complete trolley road of the present day, and showing the cost of the West Side trolley road as follows:

2.01 miles single track at \$24,204.17.....	\$48,650.39
26.575 miles single track at 18,573.46.....	493,589.68
68.68 miles single track at 18,006.10.....	1,236,658.97
25.97 miles single track at 18,573.46.....	482,352.76
50.32 miles single track at 17,148.08.....	862,891.20
173.555 miles, average at \$18,000.88.....	\$3,124,143.00

CHICAGO STREET RAILWAYS.

593

Sec. 12.—Mileage of West Side Lines.

	Miles, S. T.
Chicago Passenger Railway—	
Horse road at date of lease, November 16, 1888.....	29.79
New horse road built by West Chicago Street Railroad Company for account of Chicago Passenger Railway Company since lease, November 16, 1888.....	4.40
Chicago West Division Railway—	
Horse road at date of lease, October 20, 1887.....	98.45
New horse road built by West Chicago Street Railroad Company for account of Chicago West Division Railway since lease, October 20, 1887.....	1.96
West Chicago Street Railroad—	
New horse road, built since lease, October 20, 1887.....	50.32
New cable road.....	1.23
New electric road.....	25.97
Total	212.12

Since the lease of October 20, 1887, the following changes have been made in the character of the roads included in the above mileage, viz:

	Miles, S. T.
Chicago Passenger Railway—	
Original horse road.....	29.79
Converted into cable road.....	3.15
Converted into electric road.....	24.185
Transferred to Chicago City Railway, Madison to Washington streets on Michigan avenue.....	0.075
Horse road still remaining.....	2.38
Chicago West Division Railway—	
Original horse road.....	98.45
Converted to cable roads.....	25.38
Converted to electric roads.....	66.77
Transferred to Chicago City Railway, to State on Lake (450 ft.).....	
Horse road still remaining.....	6.26
West Chicago Street Railroad Company—	
New horse road, built since the lease of October 20, 1887 and afterward converted into electric road.....	50.32
New horse road built for account of West Division Railway since lease, October 20, 1887, afterward converted into electric road.....	1.96
New horse road built for account of Chicago Passenger Railway since lease, October 20, 1887, afterward converted into electric road.....	4.40
Add new cable road built.....	1.23
Add new electric road built.....	25.97
Total	406.190

If from the above totals is deducted the 860 feet of single track road transferred to the Chicago City Railway and to the remainder is added 457 feet of double track or 914 feet of single track road acquired from the North Chicago Street Railroad and already referred to in the exhibit as forming part of the existing mileage of the West Chicago Street Railroad the remainder will be 1,120,044.3 feet, or 212.13 miles, single track, distributed as follows:

	Feet single track.	Miles single track.
Cable road.....	157,131.	29.76
Electric road.....	917,291.6	173.73
Horse road.....	45,621.6	8.64
Total	1,120,044.2	212.13
Van Buren street tunnel.....	3,306.9	.63
	1,131,351.1	212.76

The electric line from Armitage avenue to Logan Square, on Milwaukee avenue (5,684 feet double track), was built by the West Chicago Street Railroad Company, but is now being operated by the North Chicago Electric Railway Company and is therefore not included in the above mileage. The 3,309.9 feet of track of Van Buren street tunnel, although built by the Tunnel Company, is practically a part of the West Chicago Street Railroad Company and is therefore included. Four hundred and fifty-seven feet of double track on Fifth avenue, from Lake street to Randolph street, is included in the above mileage, although originally built by the North Chicago Street Railroad Company.

BIBLIOGRAPHICAL INDEX.

The following subject index is intended to continue the work begun in the first number of **MUNICIPAL AFFAIRS**. The March, 1901, issue was entirely devoted to "A Bibliography of Municipal Problems and City Conditions," which contained all of the indices previously published, revised, re-arranged and made complete to January 1, 1901. So far as possible, all books, pamphlets, reports and magazine articles of interest to students of city government which have appeared in the last five months—prior to June 1, 1901—are included in the following list. Future numbers will contain similar indices for each preceding quarter.

In the arrangement of the references, the following plan has been adopted: All relating to any one city have been grouped under that city. Thus, references on Sewage Disposal in Berlin are found under **Berlin**, subhead Sewage Disposal. The same is true as to countries. The references to Water Supplies in the United States, for instance, are under **United States**, subhead Water Works. In each case, cross references to the city and country have been placed under the main topic. Thus, for example, immediately following the head **Lighting** there is a list of the cities and countries under which is found additional material on lighting, but which is not general in character, relating only to the city or country referred to.

Upon classifying the material according to this plan, a small number of unclassified titles are found which resist every device of the bibliographer's art, titles referring neither to any particular city, nor country, nor single topic. These, together with the important general works, have been given special prominence by being grouped at the beginning of the Index under the rubric **City Government, General and Unclassified**. A similar plan has been followed in each country and city.

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BIOGRAPHICAL NOTES

OF THE

WRITERS IN MUNICIPAL AFFAIRS FOR JUNE, 1901.

EDWARD HAGAMAN HALL.—Born in Auburn, N. Y., November 3, 1858. Graduated from Auburn Academy, 1877, with Classical Honor. On editorial staff of Norwich, Conn., *Morning Bulletin*, 1877-1888, last three years as editor-in-chief. Associate editor of *Waterbury Republican*, 1888-1889. Many years correspondent of *New York Tribune*. Spent 1889-1899 in publishing, printing and literary work in New York. Editor or author of several books and pamphlets, mostly on historical subjects. Designed official historical medal commemorating consolidation of Greater New York. Attached to the late State Commerce Commission as special statistician. Member of Sons of the American Revolution; Deputy Governor of Order of Founders and Patriots of America; member of National Arts Club; Secretary of American Scenic and Historic Preservation Society.

ADNA F. WEBER.—Born in Concord, Erie county, New York, in 1870. Prepared for college in the public schools of Salamanca; graduated from Cornell University in 1894; as a post-graduate pursued studies in economics and social science in German and American universities and attained the degree of Doctor of Philosophy at Columbia University. His thesis on the "Growth of Cities in the Nineteenth Century" won the Grant Squires prize for research in sociology which is awarded by Columbia University once in five years. Is at present the chief statistician of the New York State Department of Labor.

W. A. SOMERS.—Received education in the common schools of St. Paul. Was engaged as a civil engineer on government and railroad work in the northern part of that state for some five years until 1872, when he took a position of first assistant in the office of the City Engineer of St. Paul. Was first assistant and finally City Engineer until 1887, when he took up the real estate business, which he followed for several years. In 1891 was asked to take charge of the assessor's office of Ramsey county and during the next year worked out the system described in this number.

HIRAM BENJAMIN LOOMIS.—Born in Hartford, Conn., June 29, 1863. Received early education in the public schools of that city and in 1885 was graduated from Trinity College with the degree of A. B. After spending two years, one in the study of law and the other as a teacher in the Hartford High school, entered the Johns Hopkins University in the fall of 1887 and took post-graduate work in physics, chemistry and mathematics. During the year 1889-1890, held the fellowship in physics in that university and in 1890 received the degree of Ph. D. From 1890 to 1893 he was instructor in physics in the University of Wisconsin; from 1893 to 1897, assistant professor in physics in the Northwestern University, Evanston, Ill. At present is connected with the Medill High School, Chicago. Has been quite prominent among the Chicago advocates of the single tax.

CLINTON ROGERS WOODRUFF.—Born December 17, 1868, of a long Philadelphia ancestry. Graduated with first honors from the Central High School and from the collegiate department of the University of Pennsylvania; also studied law and graduated from the law department of the University of Pennsylvania. Was treasurer and secretary of the Philadelphia Municipal League from 1891 to 1897 and is now its counsel. Is also secretary of the National Municipal League, the Pennsylvania Ballot Reform Association and the Public Education Association. Is a member of the Executive Council of the Pennsylvania Civil Service Reform Association, trustee of the American Institute of Civics, vice president of the American Humane Union, and connected in various capacities with many similar organizations. Was a member of the Pennsylvania Legislature, session of 1897, and was appointed to two of its most important committees, those on the judiciary and general municipal corporations. Although engaged in the active practice of law in Philadelphia, is a frequent contributor to the leading magazines and newspapers.

WILLARD WINSLOW.—Born in Boston, April 30, 1865. Graduate from Boston Latin School. Has been in lumber business since 1880 in nearly every state of the Union. Has some experience in amateur politics here since 1892.

WILLIAM J. GAYNOR.—Born in 1851, Whitestown, N. Y. Early education was meager, but later studied in Boston and began the practice of law in 1875. Has argued many prominent cases in criminal and constitutional law. Secured the conviction of John Y. McKane and has always been prominent in the movement for better city government in Brooklyn and New York state. In 1893 was elected justice of the supreme court, which position he is now holding. Has been offered several times nomination for Governor and other high offices by the Democratic party. Is a frequent writer on legal and other subjects for the best magazines.

MILROY MALTHIE.—Born near Hinckley, Ill. Received his early education in the public schools and the preparatory department of Upper Iowa University, graduating from the college in 1892. Spent one year in the graduate school of the Northwestern University, devoting particular attention to municipal government. Was awarded, in 1893, the Dewey prize of \$100 in Political and Social Science, and the Cushing prize of \$100 in Municipal Government for a dissertation upon *The City Government of Chicago*. From 1893 to 1895 taught higher mathematics and economics in Mount Morris College, Illinois, leaving there to accept the university fellowship in administrative law at Columbia University. Received the degree of Ph. D. from the latter institution in 1897, having given particular attention to administrative law, public law, economics and municipal government. After graduation, was chosen secretary of the Reform Club Committee on Municipal Administration and editor of *Municipal Affairs*. Spent the summer of 1899 studying municipal problems and conditions in Europe. Prize lecturer upon municipal government in Columbia University, 1900. Has written *English Local Government of To-Day*; *Central Administrative Control in England*; *The English Local Government Board*; *Municipal Functions*; *A Study of the Development, Scope and Tendency of Municipal Socialism*; and several papers upon other municipal subjects appearing in various magazines.

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SYRACUSE WATER SUPPLY. By James H. Hamilton.
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